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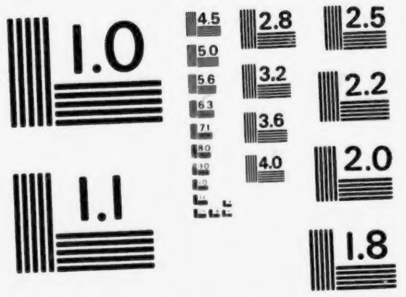
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By-Blount, Nathan S.; And Others

A SUMMARY OF INVESTIGATIONS RELATING TO THE ENGLISH LANGUAGE ARTS, ELEMENTARY AND SECONDARY, 1967.

National Council of Teachers of English, Champaign, Ill.; National Council of Teachers of English, Champaign, Ill. ERIC Clearinghouse on Teaching of English.

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Descriptors-*ADULT EDUCATION, *BIBLIOGRAPHIES, *DEVELOPING NATIONS, *FOREIGN COUNTRIES, *PUBLICATIONS

This collection of research reviews summarizes 177 investigations in the English language arts on the elementary and secondary levels. The elementary education section includes all research reported in journals between January and December of 1967 in the following areas: (1) Research Summaries and Listings, (2) Language, (3) Written Communication (Composition, Spelling, and Handwriting), (4) Studies in Reading, (5) Beginning Reading Instruction, (6) Programs and Grouping Practices, (7) Vocabulary and Word Analysis, (8) Reading Achievement and Some Correlates, (9) Interests and Literature, and (10) Special Problems and Reading. (Bibliographical references to these investigations are found within the text.) The secondary education section is limited to empirical, systematic investigations on the following topics: (1) Bibliographies, Checklists, and Summaries of Research, (2) Surveys of Research and Trends, (3) General English Pedagogy, (4) Composition, (5) Reading, (6) Oral Expression, and (7) Language. (A bibliography of the investigations relating to secondary education is appended.) (JS)

National Council of Teachers of English
ERIC Clearinghouse on the Teaching of English

A SUMMARY OF INVESTIGATIONS RELATING TO THE ENGLISH LANGUAGE ARTS

ELEMENTARY AND SECONDARY

1967

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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December 1968

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Summary of Investigations Relating to the English Language Arts in Secondary Education: 1967

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BY research studies, this author means reports of empirical, systematic investigations, reports presenting quantified findings which permit prediction and generalization beyond the particular setting of the study. Such research is verifiable in that it reports the analysis of the data, together with results and comments. Such research most often takes the form of case studies, experimental studies, surveys (longitudinal or normative), causal-comparative studies, and summaries of the above.

The research reported here was located through the bibliography of research (Blount, 1967 a, b) printed in the Spring and Fall numbers of Volume I of *Research in the Teaching of English* (*RTE*). The *RTE* bibliography has been compiled from a basic master list of approximately one hundred journals high in their yield of research and from various book and nonprocessed sources.

The research reported here is selective rather than exhaustive. Hopefully, the summary contains the research with the most relevance for the teaching and learning of English.

General

A number of the research studies published in 1967 deal with content of a rather general nature. Under this "general" category fall such topics as bibliographies, checklists, and summaries; surveys; and general English pedagogy.

Bibliographies, Checklist, and Summaries of Research

Blount (1967 c) summarized selected investigations relating to the English language arts in secondary education for 1966; and prepared bibliographies of research in the teaching of English for the year 1966 (1967 a) and for the period January 1, 1967—June 30, 1967 (1967 b). Petty and Burns (1967 a, b) summarized research in English language arts in the elementary school. Staiger (1967) also published on language arts research for 1966. Gunderson (1967) published critiques of recent Cooperative Research

Projects, Office of Education, U.S. Department of Health, Education, and Welfare. Summaries of investigations relating to reading, July 1, 1965, to June 30, 1966, were prepared by Harris, Otto, and Barrett (1967). Hayes and Orem (1967) prepared an inventory of projects and activities in reading and English. Finally, the April issue of the 1967 *Review of Educational Research* contains valuable summaries of research in the teaching of English by Devine, Early and Odland, Horn, Samuels, Summers, and West (1967).

Surveys of Research and Trends

Berry (1967) reports a study of 174 college graduates who majored in English.[1] The respondents were from five institutions in the Missouri-Kansas area and were graduated from 1953 through 1957. The data were from tape-recorded interviews and from the tabulated results of an open-end questionnaire. Among the research findings are these: Personal interests, rather than plans for a future career, motivated the choice of the English major. The graduates majored in English because of (1) personal interests in literature and composition, (2) a desire for self-enlargement, and (3) the fact that it was the easiest subject for them. A number of English majors rejected a career in public school teaching because of low salary prospects and/or because of dissatisfaction with one or more courses in professional education. Almost all of the respondents were ambitious to write and to publish. They could also be characterized as voracious readers who express strong interests in art, theatre, and music. Over 50 per cent of the majors stated that their English major should have included more course work in writing and in communication skills.

The Iowa State Department of Public Instruction (1967) conducted a study paralleling NCTE's *The National Interest and the Continuing Education of Teachers of English*, except that the Iowa study covered only Grades 9-12 and included all Iowa public school teachers of English carrying at least one assignment in English. The main purposes of the survey were to examine (1) existing conditions, (2) attitudes of teachers toward these conditions, and (3) reactions of teachers toward their preparation to teach English. Information was reported from two sources: (1) the 1965-1966 *Iowa Professional School Employee Data Sheet* (IPSEDS), and (2) responses totaling 1,437 (69.8 per cent of the IPSEDS population) to a locally constructed questionnaire. Information was available for 2,059 teachers who had completed the IPSEDS, the starting point of the survey. Of 2,059 teachers who reported one assignment in English, 59.8 per cent had majors in English; 22.3 per cent had related majors (*e. g.*, dramatics, journalism, library science, speech); 17.9 per cent had unrelated majors. At each grade level, approximately 29.5 per cent of English classes were taught by teachers without a major in English. All teachers held a bachelor-level degree; 14 per cent held a master-level degree. Of the 1,231 IPSEDS teachers who were English majors, 67.1 per cent were women; 32.9 per cent, men. Half of these teachers had multiple assignments. The information which now follows comes from responses to a questionnaire to which 1,437 teachers responded; the information is referred to in the original document as the Study. The previous teaching experience of the Study respondents ranged from 12.2 per cent teaching English for the first time to 40 per cent who had taught ten or more years. More upper-grade classes were assigned to teachers with the greatest amount of experience. Of teachers with no previous experience or with experience only at the same grade level, 71.4 per cent reported teaching in the ninth or tenth grades. The percentage of teachers without English majors became increasingly higher as grade level lowered. The per cent of Study teachers reporting optimum assignments (four or five classes per day with no more than 100 students per day) was 16.4. Of 458 high school districts in Iowa, 62.2 per cent had no English department chairman. A large number of teachers had not been observed by a department chairman, supervisor, or administrator. Nor had the teachers visited another classroom, participated in an inservice program, or attended a professional English meeting. However, 66.3 per cent of the teachers reported six or more hours a week on preparation; and 78.6 per cent spent six or more hours evaluating students' papers. Up to five hours per week were devoted to professional reading by 71.3 per cent of respondents; and 22.1 per cent devoted six or more hours to such study. Up to five hours per week were spent by 13.3 per cent in preparing instructional materials and by 52.4 per cent in helping students outside of school hours. Fewer than one-third of the teachers were working toward a graduate degree in English. Not even half of the majors were affiliated with NCTE; only a third held membership in the Iowa Council of Teachers of English; fewer than half used the *English Journal* often. More teachers in the Study felt inadequately prepared in language than in literature or composition; more than one-fourth of the respondents felt inadequate preparation in literature for adolescents. Over one-half of the teachers rated the school's professional library inadequate or fair. Teacher-aides were considered to be more helpful than reduced loads. Over 80 per cent of the Study teachers regarded professional libraries, time for individual instruction, more supplementary instructional materials, and encouragement to experiment with materials and ideas desirable to help them improve teaching.

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[1] A full report of this study is available from NCTE: Elizabeth Berry, *The Careers of English Majors* (Champaign, Illinois: National Council of Teachers of English). Stock No. 17109. $3.00.

General English Pedagogy

General and Miscellaneous

Conner (1966) made a descriptive study of the teaching of literature in representative public four-year Iowa high school districts. He constructed a questionnaire and sent it to a stratified random sample of literature teachers. The literature teacher was likely to be female, married, and an undergraduate major in English. The preferences of the teacher were for short stories, drama, novels, and poems. Favorite dramas were by Shakespeare (*Julius Caesar*, *Macbeth*, *Romeo and Juliet*) and Wilder (*Our Town*). The favorite novel for the population was Dickens' *Great Expectations;* the favorite poem, Coleridge's "Rime of the Ancient Mariner." Favorite short stories were de Maupassant's "The Necklace," Faulkner's "The Bear," and Thurber's "Secret Life of Walter Mitty." The literature teacher preferred to organize curriculum by genre rather than by thematic unit. She did not employ any special grouping methods in teaching literature. She preferred a combination of sociopsychological, didactic, and emotive approaches to the teaching of selections from literature. The most common instructional materials for the teachers in this study were a set of dictionaries, a set of literature anthologies, a set of a single novel, and one additional set of literature anthologies.

Patty (1967) tested a hypothesis dealing with the relative effectiveness of teaching Writing III at Oregon State University by closed-circuit television as compared with conventional class procedures. The investigator hypothesized that students taught by television (experimental group) would achieve as well as students taught in conventional classrooms (control group) in terms of samples of writing. The experimental group consisted of 130 *S*s taking Writing III on closed-circuit television. The control group was comprised of *S*s matched with the experimental group by scores on a writing sample. The dependent variable was score on writing samples. The reliability coefficients for raters of the writing samples were at or above .70, a sufficiently high correlation to justify the use of writing samples for matching pairs and for testing the hypothesis. The investigator's hypothesis was not rejected: both experimental and control groups showed a mean gain in achievement. Students taught by television achieved as well as students in conventional classes in terms of writing samples.

To determine differentiation of teacher behavior with classes of different ability levels, Pfeiffer (1967) conducted a study of verbal interaction and cognitive goals at two different ability levels. There were five teachers, each teaching two eleventh-grade English classes of different levels of ability in a large suburban high school. The investigator completed the Flanders' interaction analysis as an index of classroom climate and teacher influence. And the five teachers were interviewed to obtain an estimate of time emphasis on student talk, teacher talk, and cognitive goals. For each class, the investigator analyzed two tests, using the six major categories from Bloom's *Taxonomy of Educational Objectives: Cognitive Domain.* Among the findings were that the English teachers did not differentiate their patterns of teacher-pupil interaction in classes of differing levels of ability. Four of the teachers used more than half of the class time for their own talk; they used direct influence (criticism, directions, or lecture) more than indirect influence (praise, questions, use of student ideas). Three of the teachers used more indirect influence with the class which they preferred. The investigator found that the cognitive goals which the teachers believed they emphasized were not the goals which were included on the tests for the several classes. Teachers often indicated that one category of cognitive goal was important but then tested for another category. Pfeiffer recommended using Bloom's *Taxonomy* as a basis for improving teacher-constructed tests, and for evaluating and revising curriculum. She also suggested interaction analysis as a tool by which teachers might study their own teaching behavior and work toward achieving greater teacher-pupil verbal interaction for an effective classroom climate.

Scott (1966) compared students enrolled in an experimental, team-teaching, ninth-grade English program with students enrolled in a traditional ninth-grade English program. Comparisons were made on the basis of (1) the students' ability to learn and to use principles of grammar, (2) students' ability to analyze and interpret literature, and (3) students' achievement. The population consisted of 163 experimental *S*s, and a like number of control *S*s. Pretests were the *California Test of Mental Maturity* and the *Iowa Tests of Educational Development, Subtests 3 and* 7. After a thirty-six week period, final achievement measures were taken. Among the findings was a significant difference ($p<.05$) in student achievement in the two English programs. The difference favored *S*s in the experimental team-teaching program in grammar; the difference favored *S*s in the control traditional group in progress in literature. Scott concluded that when mastery of grammar is an objective, a team-teaching approach can help students achieve mastery; and that when developing literary appreciation is an objective, a traditional approach can be more effective than a team-teaching approach.

Evaluation

The purposes of the Clopper (1964) study were (1) to determine if the services of contract correctors contribute to gains in students' English skills and (2) to determine if educational differences justify the cost of such a program. There were 360 twelfth-grade students in twelve participating high schools. Each teacher had one experimental group (contract corrector) and one control group (no contract corrector). Each contract corrector was a college graduate with a major in English. Treatment was for thirteen weeks. The experimental group wrote two themes per week; themes were evaluated by contract correctors. The control group wrote one theme every two weeks; themes were graded by the classroom teacher. Clopper hypothesized that the experimental group, at the end of treatment, would produce compositions of higher quality as measured by the *STEP Test*. He further hypothesized that a ranking technique, used at intervals during treatment, would show that the compositions by the experimental group would be ranked increasingly higher than would compositions by the control group. *STEP, Level 2A*, was given pre-treatment; *STEP, Level 2B*, post-treatment. Data were analyzed by covariance. The ranking procedure employed Wilcoxson's T-test as the measure of significance. Clopper found that contract correctors do not contribute to significant gains in English skills. Findings on the quality of the compositions were contradictory: the ranking method found higher quality among compositions by the control group; statistical analysis found advantages among compositions by the experimental group. Two recommendations made by Clopper were: (1) that correctors not be employed if increased educational gains are the sole purpose of the curriculum and (2) that funds might give greater relief if used to reduce class load or to provide non-professional clerical services.

The Follman and Anderson study (1967) compared five methods of rating English themes. Five groups of five raters, English majors in education, were selected and were paid to assign grades to ten themes. The themes, about 370 words long, were from high school and college writing and offered a wide range of writing ability. Each rater graded the same ten themes, but used one of five methods. These methods included (1) the *California Essay Scale*, in which 25 questions about the content, organization, style, and mechanics of a theme are asked; (2) the *Cleveland Composition Rating Scale*, in which content, style, and conventions are rated on ten scales such as "organized" versus "jumbled"; (3) the *Diederich Rating Scale*, in which points are given in eight topics ranging from ideas and organization to spelling and handwriting; (4) the *Follman English Mechanics Guide*, a check list concerned with punctuation, sentence structure, paragraphing, diction, and usage; and (5) *Everyman's Scale*, in which the rater's own particular criteria are used. After determining that the rater's groups were not different in English skills, the investigators tested the rating methods for significance. The essays received substantially the same scores from all five rating groups: the correlations between four of the rating scales ranged from .93 to .99. Correlations for the *Diederich Scale* ranged from .51 to .61. A reliability measure showed four of the scales above .93 and the *Cleveland Scale* at .81. From these results the authors inferred that rating scales measure many common elements and that the usual unreliability of theme evaluation occurs because of the heterogeneity of the academic and experiential background of raters.

The primary purpose of an investigation by Marshall (1967) was to determine the influence of errors in grammar, punctuation, and spelling on the grades assigned by teachers to an essay examination. A second purpose was to study the teachers' awareness of the influence of errors on grades and to investigate their willingness to grade an essay examination on content only. The essay examination used in the study was based on a topic from American history and was designed to receive an average grade of B or slightly higher. Twelve error-forms of the essay were constructed containing various numbers of spelling, grammar, or punctuation errors; a thirteenth form contained no errors. Seven hundred classroom teachers in the five-state area, Colorado, Kansas, Missouri, Nebraska, and Oklahoma, were used. The directions to the teachers for grading were highly detailed and explicitly stated that the essay was to be graded on content only. Analysis of covariance was applied to the grades assigned to the thirteen forms. Results of the study indicated that the quality of composition on an essay examination influences teachers even when the teachers are given directions to grade on content alone following an outline of desired content. The lowest mean grades were given to the examinations containing spelling errors only and those containing grammatical errors only. The mean grades given to punctuation forms and combination forms did not differ significantly from the grades assigned to the control form. The investigator concluded that teachers are influenced by composition quality even when they attempt to grade solely on content.

Another study on the grading of essay tests was conducted by Schumann (1966). The study compared (1) the consistency with which a group of teachers using common grading criteria judged essay tests with (2) the consistency with which a control group of teachers grading the same papers using whatever criteria each customarily employed judged the same essays. The student population consisted of 142 high-school seniors. Each wrote on a detailed essay question validated by leaders in English education. The same educators also suggested improvements in the grading criteria used by the evaluative teachers. The evaluative teachers (using common grading criteria) read each paper three times and made separate assessments for content, organization, style, and mechanics. A control group of comparably-skilled teachers (not using common grading criteria) read the essay responses only once. Pearson product-moment correlations tended to favor the grading done by the evaluative group teachers: correlations derived from their final grades were higher than the pairs of control teachers' correlations. The control teachers, employing whatever grading criteria they wished, assessed essays more liberally than did the evaluative teachers. The control teachers gave few F's; and the evaluative teachers, few A's. Among the investigator's conclusions were that inservice meetings and/or use of common grading criteria enhance the consistency with which teachers evaluate essay questions.

Testing

Although conducted with adult *S*s in England, an experiment by Heim and Watts (1967) has relevance for the secondary school English classroom. Hypotheses dealt with comparisons of the results of multiple-choice and open-ended techniques on a test of vocabulary. The *S*s were one hundred sailors, seventeen to twenty-six years of age. The subjects were divided into two groups matched on an intelligence test. The two groups were designated M (*S*s taking the multiple-choice items first, then the open-ended items) and O (*S*s taking the open-ended items first, then the multiple-choice items). The vocabulary test was two forms of a list of forty words which make up the self-judging *Vocabulary Test E* (Heim and Watts). Testing was conducted over a period of some months. In each case, the difference between the multiple-choice mean score and the open-ended mean score was significant ($p < .01$). Multiple-choice provided a far easier task than did the open-ended answering. The greatest difference was found among *Ss* who took the open-ended form first. There was a tendency for members of Group M to answer open-ended items with the correct answer as given in the multiple-choice test although they had been given no knowledge of results.

Materials

Hawkins (1966) studied the structural-transformational foundations in instructional materials designed for use in English classes in the secondary school. The criteria which he established for each of the ten textbooks which he analyzed were: (1) it must include descriptions of grammar based on structural or transformational theory; (2) it must be designed for use in secondary schools; and (3) it must be for sale for use in secondary schools. Hawkins evaluated the books on the following questions: Does it provide a bridge from traditional grammar to newer approaches; does it present skills other than the study of grammar; does it provide illustrative material; does it make inductive presentations; and so on. He concluded that the selected textbooks revealed dependency on the theories of structural linguistics and of generative-transformational grammars.

Yeazell (1966) studied selected literature used in public schools in ninth-grade English to determine (1) what, if any, values were presented; (2) how the ideas were presented; and (3) whether the ideas presented were consistent with values considered desirable by educationists and by social critics. The investigator examined 137 short stories from anthologies used in Grade 9 to determine their value content. (For purposes of the study, value was defined as "ideas of a normative value which regulate or direct behavior.") Ralph K. White's value analysis was used for categories for recording data. The unit of analysis was the episode. The literature did reflect some values considered desirable but often exemplified a class and a racial bias in the direction of white, middle-class American society. Moral and ethical groups were largely ignored in the short stories. The most desirable character traits shown in the literature were physical strength and bravery, not intellectuality or rationality. The female characters were few in number and were unrealistic and highly stereotyped. For a large number of the stories, there were two trends in the characters: (1) personal adjustment or self-fulfillment were achieved through traditional values conforming to the Protestant ethic; and (2) there was strict adherence to standards and values considered worthwhile by groups such as family or peers. From her study, Yeazell drew three possible implications for the English teacher: (1) teach literature without regard for the value system contained; (2) discard many currently used short stories; (3) determine whether literature in the anthologies reflects current American character. Yeazell thought the latter preferable.

Composition

Donelson (1967) conducted a general investigation of variables distinguishing between effective and ineffective writers in the tenth grade. The population for the study was 1821 tenth-grade students from two large public high schools and one large parochial high school in a midwestern city. At approximately three-week intervals, *Ss* wrote three themes in class. The three theme topics were of different natures: narrative, expository, and critical reasoning. The investigator read and rated twice each of three themes by the 1821 students. Only students with two of the three themes in a relatively effective or relatively ineffective category were retained for final reading and rating by judges. There were 214 *Ss* with at least two themes in the relatively effective pile; 218 *Ss* with two themes in the relatively ineffective pile. Four judges, experienced in teaching composition, agreed on standards of effective writing and rated the 432 sets of three themes. Pearson product-moment correlation coefficients were calculated for the ratings. The mean correlation among judges in theme rating was .84. From the ratings of these judges, a final group of ineffective student writers ($N = 126$) a final group of effective writers ($N = 124$) were chosen. Each of these *S*s was given a questionnaire of 68 items relating to parents' occupation and education, home environmental factors, personal data, interest in school activities and classes, English classes liked and disliked, and so on. Other independent variables were academic records, the *Iowa Tests of Educational Development*, and the *Otis Self-Administering Test of Mental Ability, Higher Examination.* Among the findings was that effective writers had parents with a greater amount of formal education and a higher socio-economic status. It appeared that better writers might be girls, and were likely to be interested in college-centered vocations. The effective group chose more academically oriented classes as favorite classes. English was the class least liked by ineffective writers. Data suggested that effective writers possessed more books and were more likely to write for personal pleasure. Finally, measures of scholastic aptitude and of academic status suggested that the better writer was likely to be brighter than average.

Tovatt and Miller (1967) examined the improvement in writing that resulted from the use of three language modes. Several kinds of stimuli were combined in an oral-aural-visual (OAV) approach in which the students practiced oral forms of language to improve writing. Intonation was applied to punctuation; oral discussion and criticism of what was to be written preceded actual writing; and oral sentence patterns were tested against written patterns. In this approach, *S*s used a system of tape recorder and audio-active earphones, the rationale being.

> . . . that the writer not only hears his voice as others hear him, but also that the reinforcement of hearing himself clearly leads to greater objectivity in his eradicating (or editing) of speech faults transmuted to writing and, at the same time, allows him to *hear what he wants to say* and to test those utterances against his ingrained, and continually modified, language patterns (Tovatt and Miller, 1967, p. 8).

The authors compared OAV with a conventional method of teaching composition by randomly assigning thirty ninth-grade students to each method. The length of treatment for each group was one year. Five pre- and posttests were given: *STEP Reading, Writing,* and *Listening; Cooperative English Usage;* and *Modern Language Aptitude.* In addition, five essays were collected during the year and were graded following the ETS rating form; and attitude scales were administered. During a second school year, eighty ninth-grade students used the OAV; and comparisons were made among the gains of students of high, medium, and low mental ability. The results of the first-year program showed significant differences on the three *STEP Tests* and the *Cooperative English Usage Test* in favor of OAV *S*s ($p < .01$). The essays showed no changes in favor of OAV *S*s; the attitude scales showed slight changes in favor of OAV *S*s. The results from the second-year program with eighty new *S*s showed that the high ability *S*s gained greatly in listening skills; and differences between ability groups were maintained in writing essays. The other tests showed significant but equivalent gains for each ability level.

West (1966) reports a comparison of a "composition equivalencies" approach and a traditional approach to teaching writing. The "composition equivalencies" materials contained writing and study exercises focusing on concepts and skills needed for the next major writing assignment, short, self-rewarding writing and analysis assignments. For example, before a major assignment in writing a character sketch, the student using "composition equivalencies" material considered the topics of selecting a dominant impression, using action to support a dominant impression, writing conversations which reveal character, and so on. The *Ss* used were 226 tenth-graders. The length of treatment was one academic year. Each *S,* treatment and control, wrote two impromptu compositions at the beginning of treatment and two impromptus at the end of treatment. Each paper was rated three times by experienced teachers who had been trained in the use of the *Diederich Scale.* Means were determined for general impression, ideas, organization, flavor, wording, grammar and sentence structure, punctuation, spelling, manuscript form, and total. Other analyses were made for *Ss* in the top and bottom quartiles and the middle half of each group on IQ or verbal ability. No significant differences among groups were found. A mean correlation of .53 among raters might have contributed to such a finding.

Reading

Brown (1966) sought to investigate the relationship of high school readers' attitudes and abilities in reading comprehension in the light of critical reading responses. The topics for critical reading responses were (1) Communism and (2) Negro racism. For each topic there were four articles. And for each article three types of questions were constructed: (1) fact-opinion, (2) interpretation of conclusions, and (3) evaluation of arguments. Attitude scales were constructed for each topic. Standardized tests yielding information on reading ability, mental ability, and so on were given. There were 270 eleventh-grade *Ss* (145 males, 125 females) from ten college preparatory English classes. Treatment consisted of the English teachers' presenting articles and questions on alternate days for three weeks. The topics read by *Ss* were alternated. The experimenter administered the attitude scales and standardized tests. The students tended to give more correct responses to questions on topics on which they have experienced favorable attitudes. Brown proposed further investigation of a generalization that the topics which students view less favorably produce a greater number of inaccurate responses.

Fishco (1966) studied the relationship between creativity in writing and comprehension in reading of seventh-grade students. He also examined the relationship between the student's ability to write creatively and (1) sex, (2) chronological age, (3) general intelligence, and (4) interest in the topic used as the motivational device to stimulate writing. There were 95 *Ss,* representing the total seventh-grade class of Northwestern Union School District, New Tripoli, Pennsylvania. At the beginning of the 1965-1966 school year, the *California Test of Mental Maturity* and four sections of the *Gates Basic Reading Test* were administered. Stimulated by a verbal problem, each *S* provided a creative writing sample. To rate the writing sample, the investigator structured a creativity scale consisting of five areas: (1) sensitivity to problem, (2) flexibility, (3) ideas, (4) fluency, and (5) evaluation. The author scored the writing. Data were analyzed by a multiple-linear regression program and by analysis of variance techniques. Differences at the .05 level or better were considered significant. Sex and creativity correlated beyond the .01 level; the correlation was higher for girls than boys. Creativity in writing did not correlate with chronological age, interest in the motivational device, language IQ, nonlanguage IQ, or total IQ. Reading comprehension and IQ were significant beyond the .01 level. However, reading comprehension did not appear as a significant main effect for creative writing scores.

Hafner (1967) reviewed the literature relating to the use of context for determining the meanings of words and phrases in a reading selection. In summary, he suggested that use of context underlies mature reading, that context is of value in determining meanings in reading, that there is a normal distribution of ability to use context, and that this ability is related to reading achievement, intelligence, and personality factors. Ability to get word meaning from context involves recognizing the relationships among meanings, inferring meanings, and paraphrasing meanings. Hafner recommended that secondary school and college teachers teach context skills.

McCloskey (1966) reported information dealing with the free reading interests of 120 sixth-grade Negro boys in public schools in disadvantaged areas in New York City. The investigator conducted interviews on a one-to-one basis. She compared three groups of students: upper quarter students, lower quarter students, and boys over thirteen years old. Analysis of responses revealed that the sixth-grade boys reported liking to read principally because they conceived reading a useful task providing for academic, economic, and/or occupational needs. The boys who did not like to read gave as their reason that they found reading too difficult. Disadvantaged Negro boys had a strong interest in nonfiction book categories. The sample's interest in sports books, especially for boys in the upper quarter, appeared stronger than has been reported in other studies of the reading interests of elementary school boys. Interest was also high in biography and history. When asked what kind of book they would like someone to write, a surprising number of students suggested books "About Myself." The fiction discussed most often by boys in the upper quarter included adventure, humor, and mystery. A number of students reported greater interest in books when they were in the primary grades than at the time of the interview (Grade 6).

Soares and Simpson (1967) explored interest in recreational reading of junior high school students. The students were grouped according to three intellectual ability levels, three grade levels, the sexes. The combinations of these students read 862 short stories from junior or senior high school anthologies and rated the selections on the basis of interest. From the 862 short stories, four categories were created: (1) Category A—fifteen stories rated the highest in interest by all students; (2) Category B—fifteen stories rated the lowest in interest by all students; (3) Category C—fifteen stories rated higher in interest by the high intelligence group than by the low intelligence group; and (4) Category D—fifteen stories rated higher in interest by the low intelligence group than by the high intelligence group. An analysis of variance design was used with the ratings for the sixty stories remaining. Results indicated that significant differences in reading interest in short stories did exist when students were grouped according to intellectual ability or grade level. Pronounced sex differences were not revealed. The greatest differences were found between the high and low intelligence groups and between seventh- and ninth-grade students. Analysis of the top fifteen stories revealed significant elements to be: the animal story, conflict, the main character as an attractive teen-age boy, a narrative type story, realism, suspense, and a theme of bravery and cowardice.

Oral Expression

The purpose of a study by Oberle (1965) was to analyze qualitatively and quantitatively high school English textbooks, other than literature textbooks, to determine the amount and kind of speech information contained. Oberle examined thirty-two textbooks, eight for each of Grades 9 through 12. Areas of content, a composite of speech content recommended for inclusion at the secondary level, included: basic speech skills, formal speech experiences, listening, informal speech activities, and speeches for special occasions. The amount of space allotted to each of these speech areas and the proportion of each textbook given to speech instructional material was included in the quantitative analysis. The qualitative analysis was based on a set of criteria employing quality intervals of good, fair, and poor (to indicate the accuracy and adequacy of the material), and a quality index. The results of the study showed that speech coverage in these textbooks ranged from 2 to 22 per cent of the content. Fourteen of the thirty-two texts could be rated good in coverage; four, poor. There appeared to be little relationship between the quality ratings and the amount of coverage each area received. There appeared to be little relationship among the texts for a given grade level. In general, much greater and more adequate coverage was given to speech experiences than to basic speech skills. Oberle also noted a tendency to present speech more as a set of skills than as a set of rhetorical principles and deemed this a shortcoming. She noted that many skills basic to instruction in speech were discussed under composition and that differences or extensions between written and oral composition were not made. She concluded that it cannot be assumed that the English curriculum, as judged by the content of textbooks, offers adequate speech instruction.

Language

Mellon (1967) investigated transformational sentence combining. He defined maturity of sentence structure in a statistical sense and equated maturity with "syntactic fluency," the range of sentence types observed in representative samples of student writing. His hypothesis was that practice in transformational sentence-combining would enhance the normal growth of syntactic fluency. He devised three different treatments which were given three groups of seventh-grade students over the course of a school year. One treatment was a series of sentence-combining problems (as opposed to the more usual curriculum topics of "grammar" and "usage"). These sentence-combining problems were begun in January, after introductory material on base rules, kernel sentences, and simple transformations had been taught, and continued through May. The rationale for this treatment was "to direct a maximum of the student's attention to the way that content initially expressed in collections of separately represented kernel sentences may be collapsed into single statements" (Mellon, 1967, pp. 32-33). The student, Mellon says, has a desire to grapple with the challenging sentence and is curious to know what the completed sentence will say. A second group of *S*s, the control group, received the usual curriculum which included eight hundred traditional exercises in parsing sentences. A third group of *S*s, the placebo group, was given no direct instruction in grammar. In lieu of grammar, the placebo group studied literature and usage, and received direct instruction in techniques for varying sentence structure. There was a total of 247 seventh-grade students, in four schools. All *S*s were required during the normal course of the year to write in-class compositions. A ninety T-unit paper written by each *S* during the first four weeks of school and another ninety T-unit sample written during the last four weeks of school provided the basic data for the dependent variable, syntactic fluency. Eleven tabulations were made which provided the basis for twelve factors of syntactic fluency, ranging from T-unit length to clauses per one hundred T-units to mean depth of embedding. The experimental group showed significant pre-post growth on all twelve measures, the control group showed no significant growth. When compared to growth rates reported by Kellogg Hunt,[2] the experimental *Ss* gained the equivalent of three years in their use of noun clauses, noun phrases, relative clauses, and relative words. Although the experimental and control groups were similar in prewriting, analysis of covariance showed that the experimental group surpassed the control group on every measure ($p < .01$) in postwriting. There were few or no significant differences between the control and placebo groups, but the experimental group was significantly above the placebo group on eight of the twelve measures. Neither sex differences nor school differences were significant. There was some evidence to indicate that the better students gained more from the experimental treatment than did the poorer students. Despite the significant growth of the experimental group on the twelve measures of syntactic fluency, teachers rated the themes of the control group higher in overall quality.

Two purposes of a study by O'Donnell, Griffin, and Norris (1967) were (1) to discover the syntactic resources of boys and girls at various grades in speech and writing and (2) to examine the validity of certain indices of syntactic control. While using a population of kindergarten and elementary school children primarily, the investigation should be of interest to English teachers in secondary school insofar as it sheds light on the several language development studies by Hunt, reported in this column over a period of several years. The emphases of the O'Donnell study were on identifying and quantifying grammatical structures, and on defining the sequence of the acquisition and use of these structures. Speech samples were obtained from *Ss* in Grades K, 1, 2, 3, 5, and 7; and writing samples were obtained from the same *Ss* in Grades 3, 5, and 7. The samples were *Ss*' interpretations of the action in silent animated cartoons depicting fables. Using criteria similar to Hunt's, the investigators tabulated the responses on several indices. "Garbles" occurred much more often in speech than in writing. And when taking into account the total responses, the number of garbles tended to decline with increasing age. Although written responses were shorter than oral, total length of responses increased with age. T-unit length in speech was not significantly different from T-unit length in writing. However, an analysis of the structures revealed that *Ss* displayed much greater use of syntactic resources in writing than in speech. The oral responses of boys were generally longer than those for girls, while girls were superior to boys in writing at grade level 3 and 5. T-unit length and percentage of short T-units were sensitive measures of development toward maturity. An increasing use of syntactic resources was shown by the number of transforms per T-unit, a number which rose markedly in the speech samples and even more dramatically in the writing samples. O'Donnell concluded from this data that although the use of syntactic resources in speech increases so that at Grade 3 speech is more mature than the newly learned writing skills, a shift in emphasis occurs by Grade 5 which causes writing to catch up and surpass skills in speech. The various types of transforms were examined and several of them appeared to reflect maturity quite well. Among these were adverbial infinitives, coordinations within T-units, the gerund phrase, nominals functioning as the object of a preposition, and modification of nouns by adjectives, participles, and prepositional phrases. The use of sentence patterns showed no major preference trends; even the younger children used all patterns. A reduction in incomplete clauses was apparent. First grade seemed to signal a spurt in speech development, as observed in use of adverbials, adverbial clauses, infinitives with subjects, nominals, and nominals as direct objects. Seventh grade showed another spurt in speech development in nearly all constructions: adverbial clauses, coordination, nominal function, noun clauses, and noun modification. Writing development improved markedly in Grade 5 and again in Grade 7, in such uses as adverbial clauses, complex structures functioning as direct objects, coordination within T-units, genitive forms, and relative clauses. O'Donnell rejects total number of words and number of subordinate clauses as measures of maturity and concludes that the relative frequency of sentence-combining transformations is the most valid measure. However, it is difficult to obtain the relative frequency of sentence-combining transformations, and a good approximation is mean T-unit length. The investigators found no consistent pattern of significant difference by sex.

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[2] See, for example, Kellogg W. Hunt, *Sentence Structures Used by Superior Students in Grades Four and Twelve, and by Superior Adults,* Cooperative Research Project Number 5-0313 (Florida State University, Tallahassee, Florida, and the Cooperative Research Program of the Office of Education of the United States Department of Health, Education, and Welfare, 1966).

In a study of the relationship of ability in written composition and in transformational grammar, Wardhaugh (1967) tested 120 Ss. The four tests used included (1) the *Barrett-Ryan-Schrammel English Test,* considered a test of traditional grammar, (2) the *Analogies Test* of the *California Analogies and Reasoning Test,* (3) *STEP Essay Test 2A,* and (4) a transformational grammar test developed by the investigator himself. *S*s were from Grades 10, 11, and 12, and were stratified according to IQ score. The hypotheses investigated were (1) that the four tests would be positively correlated, (2) that the transformational grammar test would be better than the traditional grammar test in predicting writing ability as shown in the *STEP Essay Test,* and (3) that all four tests would differentiate students by grade and ability level. Correlations between the four tests ranged from .51 to .58, which moderately supported the first hypothesis. However, the two grammar tests were correlated with the essay test approximately equally. All tests differentiated the three ability levels, and all tests except the transformational grammar test differentiated the three grade levels. Ability by grade interactions were highly significant for the four tests. Wardhaugh concluded that the assumption that teaching grammar makes better writers is largely invalid since grammar and essay tests are only moderately related. Thus, the decision of which grammar to teach, traditional or transformational, has little effect upon writing. Finally, he suggested that knowledge of transformational grammar is stable during Grades 10, 11, and 12, although knowledge of traditional grammar does show increase.

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Dr. William D. Sheldon
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A Summary of Research Studies Relating to Language Arts in Elementary Education

Part I

In this seventh annual review of research of elementary school language arts the number of studies included has again increased from last year. Of the 137 studies in this report the great majority deal with reading instruction, but there is an increasing number of reports relating to other aspects of the language arts.

An attempt was made by the reviewers to include all elementary language arts research reported in journals between January, 1967 and December, 1967. In some cases judgments were made as to whether or not an article was a research study. Any other omissions are the responsibility of the reviewers and are probably the result of faulty library searching. This review is once again presented under the sponsorship of the Committee on Research of the NCTE.

Research Summaries and Listings

A summary of investigations relating to reading was reported by Robinson, Weintraub and Smith.[1] Their study presented 306 research articles reviewed and grouped into six major categories. The six categories included (1) Summaries of Specific Aspects of Reading Research; (2) Teacher Preparation Practice; (3) Sociology of Reading; (4) Physiology and Psychology of Reading; (5) the Teaching of Reading; (6) Reading of Atypical Learners. In addition to the review article itself, an annotated bibliography is found at the end of the journal.

The April, 1967 edition of *Review of Educational Research*[2] included a number of articles summarizing various aspects of language arts activities. In "The Psychology of Language" section, S. Jay Samuels states that the controversy continues over the specific contributions of innate factors to the acquisition of language. James F. Kerfoot in "Reading in the Elementary School" calls for better statistical tools and designs which will enable us to solve problems heretofore unanswered. Thomas G. Devine, in summarizing the listening research, reports that most findings have supported and refined the existing assumptions. That is, listening ability can be improved through instruction; listening is affected by maturity, rate of presentation and interest of

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[1] Helen M. Robinson, Samuel Weintraub and Helen K. Smith, "Summary of Investigations Relating to Reading, July 1, 1965 to June 30, 1966," *Reading Research Quarterly*, II (Winter, 1966-1967).

[2] *Review of Educational Research*, 37:2 (April, 1967).

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subject; listening is related to reading; learning from listening can be permanent. The section on written composition reported by William W. West indicates that research in written composition remains in a kind of pre-scientific era. That is, improved techniques of scientific measurement are needed to investigate written composition. Thomas D. Horn in reporting studies on handwriting and spelling states that the research interest in these areas is extremely low. Reports on literature in the elementary and secondary schools by Early and Odland cite a need for appropriate research techniques and add that literature needs to be scientifically examined. The combination of these will provide more fruitful research in the effects of reading literature and of teaching literature.

Bormuth[3] in citing new developments in readability research reports on current studies and maintains that areas of advancement in readability research which have resulted in improved validity of readability formulas have occurred recently.

Paul Witty[4] reviewed studies of the relationship of children's reading behavior and television viewing habits over the past years. His results seem to indicate that better readers tend to view less TV than poor readers. The results of the studies show no significant relationship between TV habits and school success. A minimum of real data is noted as opposed to a maximum number of ideas and personal observations being reported.

In a review of fifteen empirical studies on the role of neurological organization in the teaching and improvement of reading, Glass and Robbins[5] analyzed the reports cited in *The Treatment and Prevention of Reading Difficulties, The Diagnosis and Treatment of Speech and Reading Problems,* and *Neurological Organization and Reading* by Delacato. The reviewers conclude that no reliable conclusions can be based on existing studies because of the following criticisms: (1) a failure of the studies cited to consider the regression effect; (2) the use of matching rather than random assignment of subjects as a means of control; (3) failure to make the experimental unit and the statistical unit equivalent; (4) an experimental bias as indicated by overenthusiasm, failure to account for Hawthorne effect, tendency to go beyond the data, and to claim gains made which could not be measured statistically; (5) analysis of correlation studies forced conclusions contrary to those drawn by the data in the original form. No stand is taken in this review regarding the theory of neurological organization or whether the techniques employed will ultimately prove effective, but there seems to be no reliable conclusion that can be based on existing studies.

A view of selected studies on the worth of i|t|a as a medium in the teaching of beginning reading maintains that the early favorable results for i|t|a reported by some researchers has not been substantiated. Fry[6] cites five U.S. Office of Education First Grade Studies comparing i|t|a and t.o. and on the basis of test results found that four out of five of the studies found no significant differences between groups at the end of the first year of instruction.

Williams and Levin[7] discussed recent

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[3] John R. Bormuth, "New Developments in Readability Research," *Elementary English,* 44 (December, 1967) 840-845.

[4] Paul Witty, "Children of the Television Era," *Elementary English,* 44 (May, 1967) 528-535.

[5] Gene V. Glass and Melvyn P. Robbins, "A Critique of Experiments on the Role of Neurological Organization in Reading Performance," *Reading Research Quarterly,* III (Fall, 1967) 5-51.

[6] Edward Fry, "i|t|a: A Look at the Research Data," *Education,* 87 (May, 1967) 549-553.

[7] Joanna P. Williams and Harry Levin, "Word Perception: Psychological Bases," *Education,* 87 (May, 1967) 515-518.

studies dealing with the association of written symbols and spoken language of young children. The studies are divided into three areas: (1) Graphemic Cues; (2) Grapheme-Phoneme Correspondences; (3) Context Cues. Conclusions drawn by the reviewers indicate that specific letters are more important in word recognition than the overall shape of the word within the graphemic cues area. In the grapheme-phoneme correspondence area of concern, the studies cited that words following regular spelling patterns are more rapidly recognized and pronounceable units are recognized more rapidly than unpronounceable. Context cues studies cited that words are recognized easier in context than in isolation. One study reported, dealing with first-grade children, found evidence that children were using all three types of cues at once.

Summers and Laffey[8] summarized doctoral dissertations in reading and language arts in the *Journal of Reading*. This research summary contains many studies directly concerned with elementary level reading. Of the 102 dissertations reported in the summary, 65 dealt with the improvement of reading at the elementary level. Comparisons of approaches to teaching reading and investigations pertaining to auditory and visual readiness were most common among the types of studies represented. Several studies were done of the effect of other types of training, that is, listening, music, etc., on reading achievement. The effects of outside factors such as double sessions, student mobility and parent participation on reading achievement were also investigated.

Berg and Rentel[9] reviewed the research on creativity. Studies and comments are found under seven headings: (1) Creativity and Intelligence; (2) Creativity and Academic Achievement; (3) Creativity and Problem Solving; (4) Creativity and Critical Thinking; (5) Creativity—Identifying Variables; (6) Creativity and Reading; (7) Creativity and Classroom Activities.

Weintraub[10] in "What Research Says to the Reading Teacher," a regular column appearing in *The Reading Teacher*, presents a number of summaries related to specific topics. The May, 1967 issue presents a summary of conflicting viewpoints concerning vocabulary control. Considered here are research studies and opinions concerned with limiting the number of new words introduced and the planned repetition of those words. The topics of word selection and the control of grapheme-phoneme correspondences are not discussed. From evidence presented, the conclusions are (1) that children do learn to read many words other than those in basal readers; (2) there is ample evidence for controlled vocabulary for most children through second grade; (3) for children of less than average ability, the control should continue even longer; (4) assuming that children have read widely outside their formal reading program and have mastered most of the basic word analysis skills, there would seem to be little value in vocabulary control beyond grades three or four.

Another summary by Weintraub[11] reports the delineation of relationships between listening and reading comprehension, identification of a listening factor, determination of conditions affecting listening comprehension, and improvement of listening comprehension. Four instructional studies conducted at the elementary level were included. They indicate that listening skills can be improved. Also included in the report are references to bibliographies and reviews of dissertations devoted to the improvement of reading.

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[8] Edward G. Summers and James Laffey, "Doctoral Dissertation Research in Reading for 1964, Part III," *Journal of Reading*, X:4 (January, 1967) 243-257; X:5 (February, 1967) 305-327; X:6 (March, 1967) 383-392.

[9] Paul C. Berg and Victor M. Rentel, "Guides to Creativity in Reading," *Journal of Reading*, X:4 (January, 1967) 219-230.

[10] Samuel Weintraub, "What Research Says to the Reading Teacher," *The Reading Teacher*, 20 (May, 1967) 759-765.

[11] Samuel Weintraub, "What Research Says to the Reading Teacher," *The Reading Teacher*, 20:7 (April, 1967) 639-647.

Another summary[12] of research concerned itself with reading readiness measures for predicting reading achievement. Because there has been so much written concerning the usual measures of readiness, intelligence, and visual discrimination as predictors, the author has chosen to place major emphasis on studies of new and different attempts to measure readiness factors.

One other report by Weintraub[13] summarizes the research dealing with reading graphs, charts and diagrams. It looks at studies which attempt to determine (1) whether pupils use graphic materials; (2) whether children can be taught to use them; and (3) what seems to be a logical progression in teaching skills of reading charts, diagrams and graphs. The research cited demonstrates that children do not pay much attention to graphs, charts, etc. even when simplified. Written texts are not facilitated by accompanying graphs and charts and these aids are rejected by children because they have not been taught how to use them and are, therefore, considered confusing and unimportant. Effects of instruction upon graph reading achievement shows that inability to interpret graphs has been due to lack of instruction. Children in grades two, three and four, and more capable children in first grade, are able to learn to read line and circle graphs. Children can interpret pictorial graphs most easily with circle, vertical bar, horizontal bar, two dimensional and line graphs following in that order. However, the material presented and the context most often dictate the most suitable graph.

Zeman[14] presents fourteen research abstracts of studies on laterality, a table summarizing results of the studies, and the short written summary quoted below. "The relationship of laterality to reading is an area that has been investigated for many years. Significant relationships have been reported by Harris, LaGone, Holland and Pace. However, in the majority of the investigations no significant relationships were found to exist."

Harris[15] and others presented a summary of investigations relating to reading between July 1, 1965 and June 30, 1966. The summary includes 143 studies listed in the following categories: The Sociology of Reading; The Psychology of Reading; The Physiology of Reading; and The Teaching of Reading.

Language

Stanners and Soto[16] investigated the ability of middle-class English-speaking children to distinguish by means of a visual reading method among highly frequent initial 3-letter word beginnings (consonant, consonant, vowel), infrequent word beginnings, and the consonant, consonant, vowel combinations which never occur in English. They also attempted to discover if knowledge of English phonological rules is a developmental sequence and whether there are six differences in the level of this knowledge.

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[12] Samuel Weintraub, "What Research Says to the Reading Teacher," *The Reading Teacher*, 20:6 (March, 1967) 551-557.

[13] Samuel Weintraub, "What Research Says to the Reading Teacher," *The Reading Teacher*, 20:4 (January, 1967) 345-349.

[14] Samuel Steve Zeman, "A Summary of Research Concerning Laterality and Reading," *Journal of the Reading Specialist*, 6:3 (March, 1967) 116-123.

[15] Theodore L. Harris, Wayne Otto, and Thomas C. Barrett, "Summary and Review of Investigations Relating to Reading, July 1, 1965 to June 30, 1966." *The Journal of Educational Research*, 60 (March, 1967) 290-320.

[16] Robert F. Stanners and Dolores H. Soto, "Developmental Changes in the Recognition of Beginning Segments of English Words," *Journal of Educational Psychology*, LVIII, v, (October, 1967) 273-277.

The population studied was 68 third grade, 70 sixth grade and 71 ninth grade pupils. Lists of the three sets of 3-letter combinations were presented to pupils and they were asked to underline the letter combination on each page which they had seen or heard most often as the beginning of an English word.

The results indicated that the ability to discriminate properly was significantly above chance for all grades. The sixth and ninth grade pupils were not significantly different from each other but each were significantly better than third graders. It appeared that discriminatory ability for the materials was well begun by the end of third grade, virtually maximal by the end of the sixth grade, and did not differ with respect to sex.

The reader would have appreciated knowing whether or not the discrimination ability would show increments of significance at the fourth and sixth as well as the seventh grade level in view of the fact that training in visual discrimination is probably ended during the fourth grade period for most pupils and increments might well be due to casual practice in grades 5 and 6.

A study of the effect of directed verbal practice on language facility in kindergarten children was conducted by Cleveland[17] on an advantaged and disadvantaged population. Each population was provided special language lessons 30 minutes a day for 16 weeks. Analysis indicated that children from the higher socio-economic class did not improve in the language areas tested while pupils from the lower socio-economic group improved significantly in three language categories. The conclusion was drawn that carefully structured language sessions were needed for economically disadvantaged pupils. The study also suggested that children from the upper socio-economic level bring a wealth of verbal ability to school and usual language lessons do not effect them significantly.

Rapier[18] attempted to determine whether Mexican-American children are deficient in the use of verbal mediation processes to facilitate learning and whether or not they can profit from training in the use of verbal mediating clues. The population studied was 80 third and fourth grade Mexican-American and Anglo-American pupils ruled for purposes of the study were matched on intelligence. Both groups were from the lower socio-economic class and differed mainly in that Spanish was spoken by one or both parents of the Mexican-American children while only English was spoken by parents of the other children.

In the first task of training discrimination Mexican-Americans made twice the errors of Anglo-Americans but the mean differences were non-significant. In the second task it was evidenced that Mexican-American pupils can profit from opportunity to use verbal mediation and it was suggested that learning disability is not due to inability to verbally mediate, but due to a lack of verbal associations to use in new learning situations. This limited study in terms of size of sample also suggested that learning difficulties experienced by the two groups were not the same and require different educational treatment.

Eldredge[19] compared the language patterns of 82 third grade boys and girls in oral and written composition. Samples of oral language were tape recorded (individually) and samples of written compositions were obtained from each pupil studied. The language samples were analyzed according to procedures described by Walter Loban. Results suggest that written and oral composition reflect the same language patterns. On most measures the pupils excelled in oral composition. Sex, age, I.Q., and socio-economic status wre related to proficiency in oral and written language.

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[17] Jack Avery Cleveland, "The Relationship of Directed Verbal Practice and Language Facility in Kindergarten Children," *Dissertation Abstracts*, 27 (February, 1967) 2438-9A.

[18] Jacqueline L. Rapier, "Effects of Verbal Mediation Upon the Learning of Mexican-American Children," *California Journal of Educational Research*, 18 (January, 1967) 40-48.

[19] Cornelia Christie Eldredge, "A Study of the Relationship Between the Oral and Written Composition of Third Grade Children," *Dissertation Abstracts*, 28 (September, 1967) 875A.

A study examining the relationship between social class and cognitive abilities of 50 middle class and 50 lower class Negro kindergarten boys was conducted by Ryckman.[20] An extensive battery of standardized and unstandardized tests such as the ITPA, Cognitive Maturity Test (Englemann). Ryckman-Bereiter-Powell Auditory Closure Test, etc., were administered to all pupils. All of the 18 cognitive variables measured discriminated significantly between the socio-economic groups in favor of the middle class. Five components accounted for 87% of the variance: General Language Ability, Structural Organization, Visual Imagery and Classification, and Chronological Age. General Language Ability correlated higher, r = .587, than any other component with social class. The next highest was Visual Classification, r = .390.

Hancock[21] determined the extent sixth grade pupils used various classifications of correct and incorrect word forms and the correlation of this usage with sex, intelligence, and socio-economic status. In addition to the Otis Mental Ability Test and the Warner Index of Status Characteristics, a test of verb tense usage designed for the study was administered to all pupils.

It was found that past tense items were easy; past participle items difficult. Misspelling was a major error in written verb tense usage. Pupils who substituted the present for the past or past participle were of low average intelligence and social-economic groups. The following were significantly related to high scores in verb usage, (in order) intelligence, socio-economic status and sex.

Welch[22] conducted a study of the language of 30 young children to determine changes in sentence pattern, sentence length, structure, and the ability to elaborate and expand over a 4 year interval. Taped samples were taken of pre-school speech of each subject on 1962. In 1966 each subject made two tapes, one in conversation with a peer and the other in conversation with the examiner. Written samples were analyzed. Analysis was made using E K Tiar's Scheme of Analysis. The results indicated that basic language patterns were well established by the start of school. Certain aspects of language appeared to be a function of age: reduced use of short utterances, flexibility in handling fixed slots and movables, increased use of compound sentences, increased ability to expand and elaborate, increased use of non-structured elements in oral language, writing was more characteristic of their early speech in terms of flexibility than of their current speech.

Horne[23] investigated the effectiveness of activities centered around children's literature and the use and understanding of figurative language of 73 experimental and 72 control sixth grade pupils. After pretreatment data consisting of age, sex, social position, intelligence and general achievement, samples of writing and an experimental test were administered. Twenty-four treatment sessions were applied from October to April to the experimental group. These sessions attempted to build understanding of analogous nature of figures of speech and to stimulate improvement in writing.

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[20] David B. Ryckman, "A Comparison of Information Processing Abilities of Middle and Lower Class Negro Kindergarten Boys," *Exceptional Children,* 33 (April, 1967) 545-551.

[21] Ray Junior Hancock, "An Analytical Study of the Written Verb Tense Usage of Selected Sixth-Grade Pupils," *Dissertation Abstracts,* 27 (May, 1967) 3773A.

[22] Rizpah Jones Welch, "A Descriptive Study of the Language of a Selected Group of Young Children at the Beginning and End of a Four-Year Interval," *Dissertation Abstracts,* 27 (May, 1967) 3766A.

[23] Rose Nell Horne, "A Study of the Use of Figurative Language by Sixth-Grade Children," *Dissertation Abstracts,* 27 (April, 1967) 3367A-3368B.

Post experimental tests of reading and writing indicated that experimental group scored significantly higher in frequency of use and understanding of figures of speech. High I.Q. scores tended to accompany understanding of, but not use of, figurative language. Age, sex and socio-economic status were not significantly related to use and understanding of figurative language.

Oral Communication

Brown[24, 25] presented two articles dealing with speech and listening in language arts textbooks. He examined the kind and quantity of speech and listening content in language arts textbooks for children in grades 3 through 6. He noted that authors and publishers expressed a need for emphasis upon speech and listening, yet the greatest number of lessons and the greatest amount of space was devoted to content and writing. Furthermore, listening was not emphasized as a distinct area for direct instruction nor was improvement in listening related frequently to improvement in speaking.

A study designed to compare certain aspects of elementary children's speech characteristics when describing and explaining events was conducted by Levin, Silverman, and Ford.[26] It was found that speech during explanation was characterized by significantly more hesitations and pauses, longer pauses, and reduced rate than speech during description. Also, spontaneous explanations were more fluent than those elicited by the examiner.

Morency, Wepman, and Weiner[27] studied the error profiles of children ages five through nine who had no known pathological base for their articulatory patterns. The subjects were administered a special articulation test, the *Wepman Auditory Discrimination Test,* and the *Peabody Picture Vocabulary Test.* The study established the common articulatory profile of children who are held to be developmentally delayed in acquiring accurate speech sound production. The profile that was derived differs only quantitatively from the profile of children who are considered normal in their articulation.

O'Connell, Griffin and Norris[28] investigated the following questions: (1) What measurable differences exist between oral and written grammatical structures in the language of children in grades 3, 5 and 7? (2) How do these grammatical structures differ in respect to differences in grade level? (3) How do these grammatical structures differ in respect to sex of the subjects? Subjects were shown two short films and both oral and written responses were

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[24] Kenneth L. Brown, "Speech and Listening in Language Arts Textbooks: Part I," *Elementary English,* 4 (April, 1967) 336-341.

[25] ________, "Speech and Listening in Language Arts Textbooks: Part II," *Elementary English,* 5 (May, 1967) 461-465.

[26] Harry Levin, Irene Silverman and Boyce L. Ford, "Hesitations in Children's Speech During Explanation and Description," *Journal of Verbal Learning and Verbal Behavior,* 6 (August, 1967) 560-561.

[27] Anne S. Morency, Joseph M. Wepman, and Paul S. Weiner, "Studies in Speech: Developmental Articulation Inaccuracy," *The Elementary School Journal,* 6 (March, 1967) 329-337.

[28] Roy C. O'Connell, William J. Griffin, and Raymond C. Norris, "A Transformational Analysis of Oral and Written Grammatical Structures in the Language of Children in Grades Three, Five, and Seven," *The Journal of Educational Research,* LXI, i, (September, 1967) 35-39.

elicited. The T-unit employed by Kellogg Hunt was the syntactic unit selected for analysis. In examining the differences between oral and written discourse it was found that the length of T-unit was significantly greater in oral than in written for grade 3; written units were longer in grades 5 and 7, but not significantly so. Differences by grade showed the length of T-unit increased significantly with advance in grade level. Length of the T-unit did not differ significantly by sex. The investigators pointed out the number of possible constructions not used by children and the restriction of the patterns used as being an indication of teaching which might be done to increase the child's flexibility in expressing ideas. The authors also suggested further research of the stylistic differences in oral and written language.

Written Communication

Composition

An attempt to determine the effect of instruction in prosody on the growth of semantic novelty in the poetry of intermediate grade children was conducted by Duffy.[29] He devised and validated an analytical instrument to be used by raters in determining semantic novelty. Analyses of pre- and post-instruction poetry samples indicated that no insight was gained concerning the effect of prosody instruction on novelty of poems. However, the instrument itself was proved valid for measuring semantic novelty.

A review of two studies dealing with the writing of i.t.a. trained children was written by Downing, Fyfe, and Lyon.[30] In one study they found that children who had been taught using i.t.a. were significantly superior in composition ability when this ability was defined as word count, size of vocabulary, and frequency of repetition of words.

The second report indicated similar results in that the composition ability of i.t.a. trained children was found to be significantly superior on seven of nine factors. Unique to this study was the rating of compositions in traditional orthography by judges. That is, all compositions were copied over in t.o. by researchers and the judges were not aware to which group a paper belonged. Therefore, neatness and spelling were held constant.

Spelling

Berquist[31] reported a study which was an outgrowth of two earlier reports from Stanford University. He constructed a descriptive model for the analysis of American-English spelling of a 17,000 word sample; the model was then used as the basis of a categorization of the 108,626 phoneme-grapheme correspondence in the sample. He found that 88.85 per cent of the phoneme-grapheme relationships were determined by phonological factors; 3.96 per cent by morphological factors; 6.61 per cent by diachronic description. The study also gives the curriculum planner listings of the correspondences keyed to the words in which they appear and the frequency of usage of these words.

Hanna, Hanna, Hodges and Rudorf[32] examined a sample of over 17,000 American-English words by determining the phoneme-grapheme correspondences of the words and by analyzing the phonological structure underlying the orthography. The first phase of the study found that consonant phonemes were represented by an equal number of graphemic options 85 percent of the time; vowel phonemes were not as consistent in their graphemic representation but were more regular than typically assumed. The second phase of the study involved a computer program set up to spell the 17,000 word sample using the rules generated in phase one. It was found that the computer spelled 49 per cent of the words correctly; 37.2 percent had only one error; 2.3 per cent had three or more errors.

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[29] Gerald George Duffy, "Instruction in Prosody as it Effects the Semantic Novelty of Poems Written by Intermediate Grade Children," *Dissertation Abstracts,* 27 (February, 1967) 2439A.

[30] John Downing, Thomas Fyfe and Michael Lyon, "The Effects of the Initial Teaching Alphabet (i.t.a.) on Young Children's Written Composition," *Educational Research,* 9 (February, 1967) 137-144.

[31] Sidney Rogers Berquist, "A Comparative Index for the Linguistic-Based Patterns of American-English Spelling," *Dissertation Abstracts,* 27, (April, 1967) 3355A.

[32] Paul R. Hanna, Jean S. Hanna, Richard E. Hodges and E. Hugh Rudorf, "A Summary: Linguistic Cues for Spelling Improvement," *Elementary English,* 44 (December, 1967) 862-865.

A study designed to test the effectiveness of machine instruction in the teaching of spelling to second and third grade children was conducted by Friedman.[33] Programmed lessons using tape recorders for presentation were developed by the investigator and the experimental group at each grade level received instruction during a year long period. The control group received spelling instruction using the same lessons presented in a traditional fashion. In examining the entire experimental group and the entire control group no significant differences in treatments were found. However, an interesting effect of treatment at different grade levels was noted. At second grade level the traditional method produced significantly superior performance by the subjects while the reverse of this was found in noting the performance of third grade subjects.

Personke and Knight[34] determined the effectiveness of 14 proofreading lessons on the spelling achievement of the subjects. Children in four sixth grade classrooms were assigned to experimental or control groups and the series of proofreading lessons were administered to the experimental classes over a three week period. The measure of spelling accuracy for the groups was the percentage of spelling errors on a creative writing sample taken at the conclusion of the lessons. The results indicated significant differences favoring the total experimental group when compared with the total control group. There were no differences noted for girls in the experimental and control groups. Boys in the experimental group made significantly fewer spelling errors than boys in the control classes. The investigators conclude that boys might well benefit from instruction in proofreading skills while the effectiveness of such a program for girls is not conclusive. They recommend further study of this area by including measures of vocabulary level and the number of different words used by each group.

An interesting study which examined whether different methods and media used in teaching reading gave rise to different kinds of spelling errors was reported by Peters.[35] The first portion of her study dealt with the spelling performance of two groups of eight year old children who were taught reading by a rigorous phonic method or by an equally rigorous look-and-say method. The groups were matched on sex, age, socio-economic level, and intelligence. The results showed no significant differences in total spelling errors by the two groups as measured by a diagnostic dictation test developed by the investigator, and a standardized spelling test. However, an examination of types of errors indicated the group receiving the phonic reading method made significantly more errors involving reasonable phonetic substitutions while the look-and-say group made significantly more unclassified errors.

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[33] Myles I. Friedman, "The Effectiveness of Machine Instruction in the Teaching of Second and Third Grade Spelling." *The Journal of Educational Research,* LX, viii, (April, 1967), 366-369.

[34] Carl Personke and Lester Knight, "Proofreading and Spelling: A Report and a Program," *Elementary English* 7 (Nov. 1967) 768-774.

[35] Margaret L. Peters, "The Influence of Reading Methods on Spelling," *The British Journal of Educational Psychology,* 37 (February, 1967) 47-53.

The second part of the report by Peters examined types of spelling errors made by 115 children using look-and-say or phonic approaches to reading instruction with the types of spelling errors made by I.T.A. trained children. Again no significant differences were noted in total number of errors but different types of errors were exhibited by the two groups.

The investigator concludes that children taught by look-and-say methods use visual techniques best in spelling; phonic-taught children do best in a phonic approach; I.T.A. taught children seem to be more systematic in their approach to spelling and seem to have a skeletal structure from which T.O. spellings can be readily accepted.

Handwriting

A study examining the relationship between reading manuscript and cursive writing was conducted by Plattor and Woestehoff.[36] They found a substantial relationship between children's abilities to read manuscript writing and their abilities to read cursive writing. A second concern of the study indicated no relationship between the ability to read cursive writing and the ability to write in cursive style.

An attempt to determine if children can learn to write with ball point pens as well as they can with primary pencils was reported by Tawney.[37] She found that first grade children could perform as well with pens as with pencils; that the speed of handwriting was faster; papers neater.

Studies in Reading

Preschool Reading

Kelley and Chen[38] reported a study designed to evaluate the effect of formal instruction in reading on the kindergarten child's achievement and attitude toward reading. The procedures included formal reading instruction for the 120 subjects in the experimental group and a typical readiness program for the 120 control subjects. The investigators reported more effective reading achievement for the experimental group. However, a measure of attitude toward reading seemed to indicate that the experimental program might have contributed to undesirable attitude formation in experimental subjects. It was also noted the subjects who received formal reading instruction exhibited a poorer attitude toward school itself than those subjects who experienced the typical readiness program.

A questionnaire study of teachers' attitudes toward reading experiences in kindergarten was reported by Zaruba.[39] The results indicated positive attitudes by kindergarten and primary teachers toward planned but informal activities for beginning reading skills to be carried out in the kindergarten. Primary teachers seemed to attribute greater importance than kindergarten teachers to more formal skills and to strong parental involvement in beginning instruction.

A longitudinal study which investigated the effectiveness of beginning the teaching of reading in kindergarten was carried out and reported by McKee and others.[40] The subjects were followed from kindergarten through grade five. The main findings included the following: (1) beginning reading skills can be effectively taught to many typical kindergarten pupils; (2) gains from the experimental program were evident in both reading comprehension and vocabulary; (3) no evidence was found to indicate that the early experimental instruction in beginning reading had detrimental effects on visual acuity, school adjustment, or attitude toward reading; (4) the permanence of gains made as a result of being taught beginning reading in kindergarten depended upon subsequent adjustments made in the subjects' instructional program.

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[36] Emma R. Plattor, and Ellsworth S. Woestehoff, "The Relationship Between Reading Manuscript and Cursive Writing," *Elementary English*, 1 (January, 1967) 50-52.

[37] Shirley Tawney, "An Analysis of the Ball Point Pen Versus the Pencil as a Beginning Handwriting Instrument," *Elementary English*, 1 (January, 1967) 59-61.

[38] Marjorie Kelley and Martin K. Chen, "An Experimental Study of Formal Reading Instruction at the Kindergarten Level," *Journal of Educational Research*, LX, v, (January, 1967) 224-229.

[39] Elizabeth A. Zaruba, "A Survey of Teachers' Attitudes Toward Reading Experiences in Kindergarten." *The Journal of Educational Research*, LX, vi, (February, 1967) 252-255.

A reaction to the Denver study has been prepared by Mood.[41] In it some questions are raised concerning the research design.

Beginning Reading Instruction

The Initial Teaching Alphabet has produced a great deal of excitement and attention, but a limited amount of research. Two dissertations completed in 1967 were readily available to the reviewers and five studies were reported in the journals.

The dissertations of Byron Ward[42] and Joan Beauchamp[43] considered the same population of 171 first grade pupils located in seven classrooms. Mr. Ward compared the progress in beginning reading of pupils taught using I.T.A. with seven classrooms with three groups of pupils each using other methods and materials.

A report of a study which lacks significance in terms of the value of the research but does give an interesting approach to organizing a school is that reported by Trione and Larson.[44] The researchers described the steps taken in their school during the nine months prior to the launching of a comparative study of the use of I.T.A. materials and standard basal readers. The pre-research steps included staff conferences, attendance at i.t.a. workshops by principal and teachers, and a meeting with parents. It is interesting to note that while the teachers who were to teach the i.t.a. attended special workshops, there is no mention that the control teachers had a similar opportunity to study the use of their basal materials. Certain parents, while aware that i.t.a. was going to be used with their children, did not know an experiment was being carried on. The value of this report is that it contains a few valuable steps which schools might take before launching "experiments".

Morris[45] evaluated the relative advantage of i.t.a. and t. o. in the teaching of reading using a sentence method and a kinesthetic method with 393 Australian pupils which the reader assumed were equivalent to first grade pupils. Every effort was made to cut down the Hawthorne effect; however, i.t.a. teachers received 18 hours of instruction while no mention is made of t.o. teachers receiving similar aid. Children were assigned randomly to experimental (i.t.a.) classes using either sentence method or kinesthetic method. Tests at end of experiment revealed that experimental groups were significantly superior to control on tests of reading ability and word recognition. The test for experimental pupils were written using i.t.a.

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[40] Paul McKee, Joseph E. Brzeinski, and W. Lucile Harrison, *The Effectiveness of Teaching Reading in Kindergarten.* Cooperative Research Project No. 50371. Denver: The Denver Public Schools and the Colorado State Department of Education, 1966.

[41] Darlene Weisblatt Mood, "Reading in Kindergarten? A Critique of the Denver Study," *Educational Leadership,* (February, 1967) 399-403.

[42] Byron J. Ward, "A Comparison of the Reading Achievement of First Graders Taught Using the I.T.A., Basal, Linguistics and Modified Linguistics Reading Programs," Syracuse University, 1966.

[43] Joan Beauchamp, "Relationship Between Various Factors Associated With Reading Readiness and the First Grade Reading Achievement of Students Instructed in the I.T.A.," Syracuse University, 1966.

[44] Verdun Trione and James Larson, "A School Explores i.t.a.," *California Journal of Educational Research,* 18 (March, 1967) 96-101.

[45] John Lloyd Morris, "The Teaching of Reading Using a Phonetic Alphabet," *California Journal of Educational Research,* 18 (January, 1967) 5-22.

Subjects taught by kinesthetic method were significantly higher in reading and word recognition than those taught by sentence method. When pupils from high SES homes were examined those taught by i.t.a. were significantly higher in reading ability than T.O. pupils. This study, like many others, indicates that i.t.a. gives an advantage to first grade readers.

Wapner[46] administered reading tests to first grade pupils taught using i.t.a. and T.O. to determine whether i.t.a. would "close the gap" in reading performance between boys and girls, younger and older pupils and whether i.t.a. pupils would outperform T.O. pupils in reading. Significant difference in favor of i.t.a. suggested that i.t.a. groups out-performed T.O. groups where sex and age were held constant; i.t.a. boys performed as well as T.O. girls, and i.t.a. young children did as well as T.O. children who were older. The study was not well described in terms of when the tests were given, which test results for the i.t.a. group were used, how the control group was tested. No explanation is given for the discrepancy between i.t.a. and T.O. population size.

Eichel[47] compared the silent reading achievement of second grade pupils taught by i.t.a. with those taught using T.O. No significant differences were found in this population of pupils.

Swales[48] investigated the attainments in reading and spelling of children taught to read using the i.t.a. The study was carried out in six different English schools with a sample of 99 pupils in i.t.a. and 99 taught in T.O. Each group contained three sub groups matched for intelligence. The results indicated that there was no difference in reading achievement between matched groups. The spelling of i.t.a. group was not adversely affected. There was no difference in incidence of backward readers. Intelligence was a significant factor in determining level of reading achievement. Boys seemed to benefit in reading more than girls from i.t.a.

A study to compare the skill of pupils who had been taught vowel generalizations with the skill of pupils who had no direct teaching about vowels and to investigate to what degree the direct teaching of vowel generalizations contribute to reading achievement was conducted by Hillerich.[49]

The population consisted of all the first grade pupils in two school districts similar in many characteristics. The materials of one group consisted of basal material plus a phonics program stressing vowel generalizations as contrasted to a second basal program with phonics material. The result indicated what one might expect that pupils who were taught vowel generalizations scored higher in applying them to the recognition of nonsense syllables than those who had not received such instruction.

Children taught vowel generalizations scored lower on a reading achievement test than those who had no specific teaching related to vowels.

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[46] Irwin Wapner, "The Initial Teaching Alphabet in a Non-Experimental Setting," *California Journal of Educational Research,* 18 (September, 1967) 201-204.

[47] Albert Julian Eichel, "A Study of the Effect of the Initial Teaching Alphabet on Reading Achievement." *Dissertation Abstracts,* 27 (May, 1967) 3611A-3612A.

[48] Terence D. Swales, "The Attainments in Reading and Spelling of Children Who Learned to Read Through the Initial Teaching Alphabet," *The British Journal of Educational Psychology,* 37 (February, 1967) 126-127.

[49] Robert L. Hillerich, "Vowel Generalizations and First Grade Reading Achievement," *The Elementary School Journal,* 5 (February, 1967) 246-250.

Anastasiow and Duncan Hansen,[50] constructed a test to serve as a criterion measure for a research project and for a computer based instruction program. The subtests were designed to measure such specific aspects of the decoding process as decoding of a key word embedded in a meaningful grammatical sentence and associating it with a pictorial representation, the demonstrating ability to indicate explicit phoneme-to-letter correspondence rules within constraints of a graphemic environment and five other similar subtests.

The pilot form of the test, administered to 32 second grade children indicated a Pearson Product Moment r of .92; split halves r over .65 except the first subscale which was eliminated. The reversed test was administered to two first grade classes and yielded r's of .90 and split halves .95.

The revised instrument is now being given to children from a lower socio-economic level than those upon which it was first used and the item pool is being expanded to develop a second grade test.

The correlations of test results and teacher ratings are .70 and above. The test appears to be a reliable and stable measure of a child's reading ability.

There is a need for tests which demonstrate the ability of pupils to apply instruction in decoding to language tasks.

Popp[51] attempted to construct a test of visual discrimination ability of letters and words and to use the test as both a diagnostic measure of specific inadequacy and as a measure of post training status; and to develop and apply training procedures which will aid pupils to improve their specific visual discrimination ability.

Experimental children were given pencils, teaching machines and instructor while control groups were given matching-to-sample programs using geometric figures.

A study to determine (1) whether kindergarten children trained to make instant response to capital letters showed differences in visual discrimination from those who did not, and (2) to determine to what extent these pupils could be trained to respond instantly to capital letters was considered by Wheelock and Silvaroli.[52]

Forty-five kindergarteners were given training to respond to 16 capital letters presented tachistoscopically. They were compared to 45 children who did not receive this training but were similar in ability and came from "high" and "low" socio-economic groups comparable to the experimental children.

The results indicated that kindergarten children can be trained to make instant responses to capital letters and that this training enhances visual discrimination as measured by certain subtests of the Lee-Clark Reading Readiness tests. The pretests favored those pupils from "high" socio-economic population while those children labeled as "low" socio-economically gained the most from training. The authors suggest that further investigation will find that children who do well on tests of visual discrimination on entering school will progress satisfactorily within the scope of the usual readiness program while those who do not, profit most from visual discrimination training and might so be taught prior to readiness training.

Pupils in sixteen kindergarten classes in Middletown, Conn. schools were studied by Brown[53] in order to determine the relationship of knowledge of consonant letter names and sounds to learning on initial sight vocabulary of words using these sounds.

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[50] Nicholas J. Anastasiow and Duncan Hansen, "Criteria for Linguistic Reading Programs," *Elementary English,* 3 (March, 1967) 231-235.

[51] Helen M. Popp, "The Measurement and Training of Visual Discrimination Skills Prior to Reading Instruction." *The Journal of Experimental Education,* XXXV, iii, (Spring, 1967), 15-26.

[52] Warren H. Wheelock and Nicholas J. Silvaroli, "Visual Discrimination Training for Beginning Readers," *The Reading Teacher,* 21 (November, 1967), 115-120.

Two treatments were developed. One involved the systematic instruction for a five week period in the visual and auditory recognition of m, b, c, t and r. The second treatment presented p, n, f, g and l. Treatments were assigned randomly to four morning and four afternoon groups. Each teacher taught one section of treatment I and one section of treatment II. Those pupils who acquired a knowledge of at least four letters for their group and not more than one letter for the other group were selected for the study. These selected pupils were exposed in small groups to a 20-minute learning session in which they were taught 10 meaningful words beginning with the 10 consonants noted above. The pupils were tested for immediate (one hour) and delayed recall (one day) of words taught. The results were analyzed in terms of number of words recalled when initial consonant was known compared with number of words recalled when initial consonant was unknown. There were no significant differences in immediate recall. There was a significant difference in the delayed recall. A further analysis revealed that delayed recall is more apt to be a factor in male than in female performance.

A related study by Jeffrey and Samuels[54] investigated the effectiveness of word and letter training or transfer of reading skills to new words. The population was 60 kindergarten children randomly selected and assigned to one of three groups: single-letter training (Gp L), word training (Gp W) and controls (Gp C).

Six graphemes were designed, each assigned to a single English phoneme for a 1-1 grapheme-phoneme correspondence. The six phonemes combined to form 8 cue words. The initial training words for Grp. W were mō, sō, bā, bī; Gp. L: s, m, a, e and 4 grapheme transfer words sē, sā, mē, mā.

Dawson[55] conducted a study to determine whether or not a conventional reading program, supplemented with a perceptual skills program would prove more effective than conventional reading instruction.

The experimental group consisted of 15 children who had failed to achieve reading skills in first grade consistent with their ability. Control Group I—were 16 children who were repeating first grade, Control Group II were 32 children placed in grade 2 on trial. All subjects had average or better mental ability, some degree of perceptual disorganization, and had not been successful in learning to read in grade one.

In a program lasting for a school year the experimental group received special visual and auditory perceptual training and also training in gross and fine motor coordination.

Control groups received only conventional reading programs. Results suggested significant differences in improvement between experimental and control group I in sight vocabulary and reading comprehension. There was a difference in comprehension between experimental group and control group II. There were no differences in word discrimination skills.

The report of the study was not clear because of the lack of information relating to sex of population, proper definition of conventional reading, identification of instruments, etc.

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[53] Sandra Senne Brown, "An Investigation of the Relationship Between a Knowledge of Letter Names and Sounds and the Mastery of an Initial Sight Vocabulary," *Dissertation Abstracts,* 27, (April, 1967) 3358A.

[54] W. E. Jeffrey and S. J. Samuels, "Effect of Method of Reading Training on Initial Learning and Transfer," *Journal of Verbal Learning and Verbal Behavior,* 6, (June, 1967) 354-358.

[55] David Kenneth Dawson, "An Instructional Program for Children With Perceptually Related Learning Disabilities," *Dissertation Abstracts,* 27 (January, 1967) 2095A-2096A.

Hanesian[56] examined the relationship between auditory abilities and beginning reading achievement with 175 first-grade children. The children were assessed at the beginning of first-grade for auditory acuity, early reading, general auditory abilities and intelligence. In the spring of the year, they were examined for auditory abilities and reading status.

A positive significant relationship was found between fall auditory abilities and reading achievement. Auditory blending had the strongest relationship to reading. Positive significant relationship was found between fall auditory abilities and intelligence. Children in general improved in auditory abilities during first-grade.

Hansen and Robinson[57] reported a survey of the differences in reading readiness and achievement among advantaged, average and disadvantaged kindergarten, first, second and third grade pupils. Readiness was assessed using the DGMS and MRT—achievement by the MAT. Advantaged subjects scored significantly higher in each grade in I.Q., R.R. and R.A. than the disadvantaged. The disadvantaged enter primary grades less ready to learn to read and maintain a comparative disability through grade 3.

Difference between advantaged and average subjects are smaller and less uniform although advantaged are more ready to begin reading instruction than average and achieve higher in second and third grades.

Difference between average and disadvantaged less pronounced. While numbers and other factors limit the value of this study, it does add to the growing body of knowledge, indicating that socio-economic status must be taken into account in reading programs especially at the readiness level.

A Study of the relation between selected reading readiness measures and acquisition of sight vocabulary in low socio-economic urban children was conducted by Serwer.[58]

The following hypotheses were tested:

Acquisition of sight words and specific readiness measures would be positive.

Girls would achieve a higher mean score on each of the measures of readiness than boys, but there would be no sex differences in correlations.

Kindergarten experiences would have a positive effect on readiness scores and the correlation of these scores with the acquisition of sight vocabulary.

The first hypothesis is supported ($P > .01$)

There were no significant differences favoring girls in five readiness areas. Boys were significantly better in knowledge of word meanings. There were no differences in correlations between sexes.

Kindergarten training resulted in significantly higher scores in auditory discrimination and visual-motor coordination.

Worley and Story[59] assessed the differences in language facility between first grade pupils of low socio-economic status and those of high socio-economic status as measured by parent yearly income.

Each of four children were tested with the ITPA in order to determine language facility (ability to comprehend and relate words and pictures and put ideas into words with pictures). The differences in performance in favor of the higher socio-economic group was at the 1% level.

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[56] Helen Hanesian, "The Relationship of Auditory Abilities to First Grade Reading Achievement," *Dissertation Abstracts,* 27 (March, 1967) 2883A.

[57] Earl Hansen and H. Alan Robinson, "Reading Readiness and Achievement of Primary Grade Children of Different Socio-Economic Strata," *The Reading Teacher,* 21 (October, 1967), 52-56 +.

[58] Blanche L. Serwer, "The Relation Between Selected Reading Readiness Measures and Acquisition of Sight Vocabulary in Low Socio-Economic Urban First Grade Negro Children," *Dissertation Abstracts,* 27 (February, 1967) 2409A.

[59] Stinson E. Worley and William E. Story, "Socio-economic Status and Language Facility of Beginning First Graders," *The Reading Teacher,* Vol. 20, No. 5 (February, 1967), 500-503.

A study comparing the effectiveness of a two-year program of individualized and basal reading in terms of vocabulary and comprehension growth and the development of positive attitude was conducted by Teigland.[60] The population was 162 randomly selected kindergarten pupils from three suburban schools. One hundred and thirty four completed the experiment.

Differences were not significant according to tests.

Individualized groups read more books.

Socio-economic level and reading achievement correlated significantly for basal group.

Girls scored higher than boys in both groups and developed more positive attitudes. The children of higher intelligence scored higher than those of lower.

Bailey[61] compared reading achievement among five groups of culturally disadvantaged first graders, each group using a different approach to reading instruction. There were no significant differences in achievement. There was significant variability among groups in word knowledge, word discrimination and language age.

Another method-material study was conducted by Hill[62] who compared reading achievement of first grade children using *Words in Color* with those using basal plus phonics system. Population—116 experimental and 64 drawn from one school selected at random from 14 similar schools. There was no significant difference.

Twenty-six of the USOE First Grade Studies were reported in the May and October, 1966 issues of *The Reading Teacher*. The 27th and last of these studies is reported by Olive Niles.[63] The purpose of the study was to examine the effects of certain changes in materials and procedures upon the achievement of first grade children identified as potential problem readers.

The study involved children in 40 classrooms of 32 schools in Springfield, Mass. To identify children who seemed least likely to be successful with first grade reading, an extensive battery of intelligence and readiness tests were used. The 40 classrooms were then divided into four groups of ten classrooms each.

Group A (control) were assigned the standard basal reader program with no changes in methods or materials from the ordinary.

Group B used the same basal program as Group A but the slower learning children were given three additional half periods of instruction per week by a special reading teacher.

Group C differentiated materials for slow children only. They used special readiness materials and then were given trade books as they were able to read them.

Group D combined the procedures of B and C. The potentially poor readers used the readiness materials, trade books, and were given three half-hours of additional reading instruction each week.

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[60] Anna Elizabeth Teigland, "A Comparison of the Effectiveness of Two Approaches to Teaching Reading—The Individualized and the Basal Reader," *Dissertation Abstracts*, 27 (March, 1967) 2754A.

[61] Carolyn Frances Bailey, "A Comparison of the Effectiveness of Two Reading Programs and a Language Development Program With Culturally Disadvantaged Children," *Dissertation Abstracts*, 27 (May, 1967) 3767A.

[62] Frank Grant Hill, "A Comparison of the Effectiveness of *Words in Color* With the Basic Reading Program Used in the Washington Elementary School District," *Dissertation Abstracts*, 27 (May, 1967) 3619A.

[63] Olive S. Niles, "Methods of Teaching Reading to First Grade Children Likely to Have Difficulty in Reading," *The Reading Teacher*, Vol. 20, No. 6, (March, 1967), 541-545. (The last of twenty-seven first grade reading studies sponsored by U.S.O.E.)

Conclusions drawn from the analysis of the data from a battery of tests given at the end of the experiment suggested that: (1) Children likely to have special problems in learning to read could be identified prior to reading instruction: (a) although slow children were subject to different treatment in the four groups, no clearly significant differences in achievement were demonstrated; (3) The authors suggested that each of differences in achievement might have been due to lack of teacher familiarity with unusual procedures, inadequacy of measuring instrument in detecting total pupil growth in reading, and lastly that improvement might not be measurable until the end of the second grade.

Nurss[64] conducted an *unusual* investigation to determine whether sentences of more complex syntactic structure would be more difficult for primary children to read than would sentences of lesser complexity. The population studied were 108 second grade pupils selected on the basis of receiving scores of 90% or above on a vocabulary test and 36 children tested at the beginning of second grade. Each pupil read 36 one sentence stories, one-half of which varied in structural organization, while one-half varied in structural depth. Subjects read 12 sentences orally, 12 silently, while 12 were read to them. Comprehension of each sentence was tested by a picture completion test and by an analysis of oral reading errors. Some of the findings suggested that sentences of greater structural depth were more difficult to read when oral reading errors were examined. Sentences of more complex structural organization were not found to be more difficult by either comprehension measure. Less complex sentences were easier to understand in oral and silent reading but more difficult when listening was demanded.

A study to assess the idea that mild neurological dysfunction, as evidenced by crossed eye-hand preference patterns interfere with learning to read was conducted by Wyatt, Cunningham and Stigler.[65]

The population of the study, 89 first grade pupils from a lower middle class socio-economic group were given the *Metropolitan Reading Readiness Test,* hand and eye preference tasks and the *California Test of Mental Maturity.* Subjects were assigned to eye or hand preference groups depending on their eye-hand performance task results. Subjects were also grouped by sex. Results seemed to indicate that boys and girls did not differ in their scores and that pupils with mixed eye-hand preferences had no greater difficulty with reading readiness tasks than those without mixed eye-hand preferences. There are a number of limitations in this study but it suggests that further investigation of the relationship of eye-hand preference and ability to learn to read would be profitable.

Bond and Dykstra[66] coordinators for the USOE Cooperative Research Program in first grade reading instruction presented their report of the 27 studies. Bond and Dykstra review the combined research and present their reaction to the results. Certainly the most significant aspect of the studies was the fact that 27 institutions and their research teams could continue their efforts and focus on the study of one educational problem. Bond and Dykstra noted that pupils of similar characteristics but from different schools achieved very differently suggesting that methods and materials might not have as powerful an effect on reading achievement as such components as the teacher, school, community and other elements quite difficult to control or assess. Bond and Dykstra also noted that teacher expectancy of pupil ability to learn to read should be raised. Programs which introduced words at a more rapid pace produced pupils with superior word recognition abilities at the end of the first grade.

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[64] Joanne Ruth Nurss, "Children's Reading: Syntactic Structure and Comprehension Difficulty," *Dissertation Abstracts* A (Vol. 28, No. 2) (Aug. 1967) 503A.

[65] E. Stephens Wyatt, Ernest S. Cunningham and B. J. Stigler, "Reading Readiness and Eye-Hand Preference Patterns in First Grade Children," *Exceptional Children,* (March, 1967) 481-487.

[66] Guy L. Bond and Robert Dykstra, "The Cooperative Research Program in First Grade Reading Instruction," *Reading Research Quarterly,* 4 (Summer, 1967) 5-141.

Thirteen of the original first grade studies continued into the second grade are reported below:

Hayes and Wuest[67] studied second grade pupils who were instructed in a basal reading program, a combination basal and phonics program, a combination phonics, filmstrip and whole class approach using the Lippincott basal reader and the i.t.a. Final testing indicated a varied effect with no one method superior to the other three. The basal reader program compared favorably with the others with pupils of low intellectual ability. In fact in the subtest of paragraph meaning the basal program pupils scored one-third of a grade higher than the other three groups. The Lippincott material gave consistent advantages in word study skills except when compared with the i.t.a. for children of high intelligence. Spelling test results favored the i.t.a. and the Lippincott materials. Paragraph meaning scores indicated that the Lippincott and i.t.a. were more successful than the basal reader with pupils of high intelligence.

The study conducted with Center City pupils in New York City by Harris, Serwer and Gold[68] used the same methods and approaches as in the first grade study with some slight modifications. The experimenters used basal readers, phonovisual phonics supplemented with basal readers, language experience with addition of group and individual book reading, and language experience supplemented with various audio-visual devices.

The most important findings of this comprehensive study were:

1. The disadvantaged children who were in the experiment scored somewhat better in reading than comparable children not in the experiment.
2. The various approaches yielded approximately the same results at the end of the second grade.
3. The Phonovisual method seemed to be the one method which handicapped new entrants, suggesting that with a mobile population this approach would create some problems for the new pupils.
4. The wide variations in achievement means within each method, seemed to indicate that the teacher, rather than the method or material, was the most important factor in reading growth.

This study was continued through a third year. The researchers suggested that the results would probably fail to reveal advantages of one method or approach over another.

The study of Spencer[69] compared an individualized reading approach with one using a basal reader. The individualized approach used in addition to a variety of materials and individualized instruction and intensive phonics program at the readiness stage. The results observed at the end of the second grade indicated that:

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[67] Robert B. Hayes and Richard C. Wuest. "ITA and Three Other Approaches to Reading in First Grade—Extended in Second Grade," *The Reading Teacher,* Vol. 20, No. 8, (May 1967), 694-697 & 703.

[68] Albert J. Harris, Blanche L. Serwer and Lawrence Gold. "Comparing Reading Approaches in First Grade Teaching with Disadvantaged Children—Extended into Second Grade," *The Reading Teacher,* Vol. 20, No. 8, (May, 1967), 698-703.

[69] Doris U. Spencer. "Individualized versus A Basal Reader Program in Rural Communities—Grades One and Two," *The Reading Teacher,* 21 (October 1967) 11-17.

1. The individualized reading pupils achieved significantly higher scores than the basal reader pupils on tests requiring reading comprehension. The girls receiving individualized reading were significantly superior to the boys in this program while the basal reader boys and girls were not significantly different in their measured reading ability. The youngest pupils were significantly superior to older pupils in both treatments in virtually all of the subtests.

The most significant implications drawn by the investigator are these:

1. An intensive phonics program should be incorporated in all reading instruction.

2. The advantage of the individualized approach seems to relate to the fact that pupils can progress at their own rate.

3. Writing and spelling skills can be developed effectively in an individualized program.

Reid, Beltramo and Muehl[70] sought to determine whether special help for both the poorest pupils in each class and the teacher would effect reading achievement at the second grade level. The specific objectives of the study were: (1) to measure the influence of in-service training on the performance of teachers, (2) to measure the influence of special lessons designed for pupils poor in reading and (3) to measure the influence on low reading level pupils of individual and small group reading instruction provided by special teachers, in addition to regular classroom instruction.

Methods used were as follows: (1) basal reader using both text and manual (BR), a control group with ten low reading group (N of 66) which used the Ginn basal readers and teachers' manual, (2) basal reader using both text and manual, with in-service training (BRIT), ten low reading groups (N of 68) which used the same materials as BR above but whose teachers participated in a series of in-service training meetings, (3) special lessons, basal text, in-service training (SBRIT), a method again using ten low reading groups, subdivided into two groups designated SBRIT-E (experimental) and SBRIT-C (control). The teachers received in-service training and used specially written lessons. The only difference in the subgroups was that the SBRIT-E pupils (N of 34) received additional reading instruction in individual or small group sessions, while the SBRIT-C pupils (N of 35) did not receive such additional help.

The results suggest no significant differences in reading achievement when groups SBRIT-C and BRIT were compared. However, SBRIT-E was significantly superior to BR and BRIT on the subtests of word meaning and word study skills. None of the methods were superior to SBRIT-C. Thus, although added special teachers seemed to make a difference producing superior results, the special lessons perhaps provided the base on which the individual or small group instruction thrived(?). To measure the influence of in-service training for teachers with low reading with low reading pupils, groups BRIT and BR were compared. The results failed to demonstrate a beneficial effect from the in-service treatment. The investigators feel that the use of a different basal series for the instruction of low group pupils is a good practice as reflected by the favorable attitudes of the teachers. They also felt that it is possible to develop a positive attitude toward and from low reading group children. Such an attitude seemed to begin with the school administrators and was encouraged by the in-service training program.

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[70] Hale C. Reid, Louise Beltramo and Siegmar Muehl. "Teaching Reading to the Low Group in the First Grade—Extended into Second Grade." *The Reading Teacher,* Vol. 20, No. 8, (May, 1967), 716-719.

The purpose of the study by Stauffer and Hammond[71] was to test the hypothesis that there is no significant difference between the effects of two methods of primary reading—the language arts approach and basal readers—when extended through the second grade level.

Seventeen areas were tested for significant differences between groups: (1) IQ gain, (2) (3) performance on *Gates Primary Reading Tests* by group and sex, (4) writing mechanics in September, (5) writing originality, (6) attitude toward reading, (7) (8) performance on *Stanford Achievement Test*, Primary II, by group and sex, (9) eagerness toward reading and reading maturity, (10) number of books read, (11) oral reading performance, (12) word recognition, (13) writing mechanics in May, (14) handwriting skill, (15) originality, interest and story originality in creative writing, (16) reading achievement in May with September scores held constant, (17) achievement in reading and spelling (Stanford Achievement) with September scores held constant.

The results favored the language arts approach in all areas except 6, 14 and 16. Leading to the conclusion that while both approaches are effective for second grade reading instruction the language arts approach is clearly the more effective of the two. In addition to advantages indicated by the results of standardized tests the language arts approach seemed to yield more success in written communication skills and reading tasks.

The widely known study of i.t.a. conducted by Mazurkiewicz[72] continued through second grade, reports results which favor the use of i.t.a. over T.O. in virtually all aspects of language development. According to the investigator, children using i.t.a. materials advanced more rapidly in reading and writing skills, developed very high spelling skills, achieved better word recognition ability in T.O. than T.O. trained pupils and demonstrated a lack of inhibition in writing. The i.t.a. pupils demonstrated no negative effective result in rate or accuracy of reading. While the investigator indicated an overwhelming advantage for i.t.a. compared to T.O. the reader felt that in condensing the study, methods of instruction and ways of matching students, might account for advantages.

The primary objective of a study by Ruddell[73] was to investigate the effect on children's word recognition and reading comprehension of published and locally prepared reading programs varying in (a) the degree of regularity of grapheme-morpheme correspondences programmed into the vocabulary presented and (b) the emphasis on language structure as related to meaning. In the second year the following hypotheses were tested:

1. Second grade reading programs possessing a high degree of consistency in grapheme - phoneme correspondences in the vocabulary introduced (Program P, Program P+) will produce significantly higher (a) word meaning, (b) word study skills, (c) regular word identification, and (d) irregular word identification achievement

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[71] Russell G. Stauffer and W. Dorsey Hammond. "The Effectiveness of Language Arts and Basic Reader Approaches to First Grade Reading Instruction—Extended into Second Grade, *The Reading Teacher*, 20 (May 1967), 740-746.

[72] Albert J. Mazurkiewicz, "ITA and TO Reading Achievement When Methodology is Controlled—Extended into Second Grade," *The Reading Teacher*, 20 (May 1967), 726-729.

[73] Robert B. Ruddell. "Reading Instruction in First Grade with Varying Emphasis on the Regularity of Grapheme-Phoneme Correspondences and the Relation of Language Structure to Meaning—Extended into Second Grade," *The Reading Teacher*, 20 (May 1967), 730-739.

scores than will the reading programs making little provision for consistent correspondences (Program B, Program B+).

2. Second grade reading programs placing special emphasis on language structure as related to meaning (Program B+, Program P+) will produce significantly higher (a) paragraph meaning comprehension and (b) sentence meaning comprehension achievement scores than will reading programs placing no special emphasis on language structure as related to meaning (Program B, Program P).
3. Paragraph and sentence meaning comprehension of second grade subjects at the end of grade two are a function of the control which the subjects exhibit over designated aspects of (a) their morphological language system and (b) their syntactical language system as measured at the beginning of grade one.

Program B consisted of the materials of a complete basal reading series while program P consisted of a Programmed Reading Series emphasizing an early presentation of grapheme-phoneme regularities and an earlier emphasis on phonic instruction than the B program.

Programs B + and P + were developed by the investigator and designed to emphasize language structure as related to meaning and supplement programs B & P.

Twenty-four second grade classes from Oakland, California, participated in this study. The teachers, randomly assigned to first grade classes the year before, followed their classes into the second year. In addition to criteria tests administered in other second grade studies, a Primary Test of Syntax, designed by the investigator measured sentence meaning comprehension.

In regard to the first hypothesis of the study, three significant differences were found between Program B+ and Program P+, favoring the latter program. These differences in the direction predicted were represented by the Word Meaning, Regular Word Identification, and Irregular Word Identification measures. When the mean values for Programs B and Program P were contrasted, no significant differences were evident.

The mean comparisons relative to the second hypothesis revealed one significant difference between Program P and Program P+ on the Paragraph Meaning comprehension variable. This significant contrast favored the P+ Program and followed the direction predicted initially.

The mean differences between Program B and Program B+ on the Paragraph and Sentence Meaning variables were in reverse of the direction predicted. It is noted that the mean contrast for the Paragraph Meaning variable was significant favoring Program B.

In considering the third hypothesis of the study, the correlation coefficients between the Morphology test scores and the achievement scores of Paragraph Meaning and Sentence Meaning were found to be, respectively, .37 and .42. The coefficients between the Syntax test scores and Paragraph Meaning and Sentence Meaning were found to be, respectively, .55 and .57. (All coefficients were significant at or above the .05 level.) These findings were interpreted to indicate that the child's control over the designated aspects of his morphological and syntactical language systems is significantly related to his Paragraph Meaning and Sentence Meaning comprehension scores. The third hypothesis paralleled the findings of the first year of the research project and was accepted.

From the author's conclusion we selected the ideas that advantages of P+ over B+ could be due to reinforcement obtained from high regular correspondences used in the vocabulary aspect of the P+ Program, contrasted to the irregular vocabulary used with the language structure supplement for Program B+.

Paragraph Meaning and Sentence Meaning achievement of second grade pupils at the end of grade two are a function of the control which the subjects exhibit over designated aspects of (a) their morphological language system and (b) their syntactical language system at the beginning of first grade. This suggests that the inclusions in readiness tests of items designed to measure the morphological and syntactical control of children's oral language would enhance the predictive validity of their instruments.

Sheldon, Nichols and Lashinger[74] investigated the effect of using Basal Readers, Modified Linguistic Materials and Linguistic Readers on a second grade population. The average achievement of the pupils instructed by these three methods did not differ significantly at the end of grade one. In extending the study through grade two, the investigators attempted to determine if difference not measurable in grade one occurred at the end of grade two in word study skills, word recognition, spelling and reading comprehension. Differences between boys and girls were also considered.

The investigators concluded from their analysis of test results at the end of second grade instruction that all three approaches were effective for reading instruction at the second grade level. Although some significant differences were noted in some of the subskills or related skills of the total reading process, none of the approaches was demonstrated to be superior in all aspects of reading. Further investigation is indicated in two areas. First, two of the methods of teaching reading emphasized comprehension while the third, the linguistic method, did not; yet, equal achievement in comprehension was observed. Second, two of the methods provide the child with training in a variety of word recognition skills, while the third, the linguistic method, provides just one technique, yet all three groups achieved equally well when tested on word study skills and word recognition.

Fry[75] reported the results of his second year study comparing children who had beginning instruction with (1) i.t.a., (2) basal readers, (3) basal readers with diacritical marks applied. The major findings were that there were no differences in reading achievement between pupils taught. There was a moderately high correlation between teacher rating and achievement. I.Q. tests were better predictors of reading success than reading readiness tests in both first and second grade.

A report of the second year of a longitudinal study to determine the relative effectiveness of an experience approach and a traditional approach was made by Kendrick and Bennett.[76]

Fifty-seven teachers and their classes from the San Diego area schools participated in the study.

The *experience approach* used the lanuage and thinking of individual children as the basis for skill development. Experiences were derived from a wide variety of activities.

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[74] William D. Sheldon, Nancy J. Nichols and Donald R. Lashinger. "Effect of First Grade Instruction Using Basal Readers, Modified Linguistic Materials and Linguistic Readers—Extended into Second Grade," *The Reading Teacher,* 20 (May 1967), 720-725.

[75] Edward B. Fry. "First Grade Reading Instruction Using Diacritical Marking System, Initial Teaching Alphabet and Basal Reading System—Extended to Second Grade," *The Reading Teacher,* Vol. 20, No. 8, (April 1967), 687-693.

[76] William M. Kendrick and Clayton L. Bennett. "A Comparative Study of Two First Grade Language Arts Programs—Extended into Second Grade," *The Reading Teacher,* 20 (May 1967), 747-755.

The *traditional method* group adhered very closely to the teacher's manual of the basal reader. Many enrichment materials were provided for the language arts program.

Only a brief summary of the comprehensive results are reported here. The findings of the longitudinal population indicate 23 significant differences on the measures used. Thirteen of these were significant at the .01 level of confidence. Of the total number of differences 12 favored the experience approach and 11 the traditional approach.

The investigators concluded that: "It would appear that as pupils continue to receive instruction in these prescribed language arts methods, the experience approach enhances achievement in those variables measured in the present study somewhat more than does the traditional method. Moreover, the experience approach seems to facilitate the achievement of girls slightly more than it does that of boys. The level of confidence in the differences observed also improves with time in instruction. In general, when exposure to these prescribed teaching methods is restricted to a single year, the number of significant differences appearing as comparable to the number appearing at the end of two years, but there are substantially fewer comparisons significant at the .01 level of confidence. The experience approach was clearly an effective method of instruction in the language arts. It appears also that achievement may be enhanced in other subject matter areas, as reflected in the superior performance of the lower socio-economic groups on the Science-Social Studies and Arithmetic Concepts tests of the Stanford Achievement Test."

A study similar to that of Kendrick was reported by Hahn[77] who presented the results of the second year of study for children involved in i.t.a., language experience and basal readers and related language development programs.

Following is a brief summary of significant differences: "ITA-LE; No differences were found on standardized tests. LE pupils read more books and wrote longer stories. ITA-BR: ITA pupils made higher scores in spelling and word study on the Stanford battery and recognized more words on the Gates Word List. BR pupils made higher scores on a Reading Aptitude Test and a Writing Mechanics Ratio Scale. LE-BR: LE pupils made higher scores on Word Meaning, Paragraph Meaning, Science-Social Studies Concepts, Spelling, Word Study, and Language tests. They also recognized more words on a word list, read more books, and wrote longer stories. BR children were stronger on the Writing Mechanics Ratio Scale."

The study of Schneyer[78] compares the result of teaching a linguistic program and a basal reading program to 484 second grade pupils in Philadelphia Public schools. End of second grade testing revealed that on five subtests of the *Stanford Achievement Test*, Primary II, three differences are significant at the .01 level, favoring the basal reader groups. These are Paragraph Meaning, Spelling and Word Study Skills. There were no differences for Word Meaning and Language. These differences, however, were not consistent at all ability levels.

At the end of the first year, the pupils in the linguistic treatment received higher adjusted scores obtained from the writing sample (writing mechanics, number of words spelled correctly, and total number of words written. At the end of the second year, the pupils in the linguistic treatment group continued to obtain higher mean scores on all of the writing measures. However, the differences were smaller and no longer significant.

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[77] Harry T. Hahn. "Three Approaches to Beginning Reading Instruction—ITA, Language Experience and Basic Readers—Extended to Second Grade," *The Reading Teacher*, Vol. 20, No. 8 (May, 1967), 711-715.

[78] J. Wesley Schneyer. "Reading Achievement of First Grade Children Taught by a Linguistic Approach and a Basal Reader Approach—Extended into Second Grade," *The Reading Teacher*, Vol. 20, No. 8 (May 1967), 704-710.

Vilscek, Cleland and Bilka[79] reported the outcome after two years of two instructional approaches: the coordinated Basal Language Arts approach and the Integrated Experience Approach. Eighteen of the original 24 first grade classrooms participated in the study.

In the nine *control* classrooms using the Integrated Experience Approach to Communication, there were many small group and individual activities. These activities were contained in seven basic language arts units which attempted to interrelate six basic areas of communication.

In the nine experimental classrooms where the Coordinated Basal Language Arts Approach was used, teachers used the Scott Foresman *Listen, Speak* and *Write* program and the Scott Foresman Multi-Ethnic Basal Reader Program along with supplementary materials as deemed appropriate by teachers.

Pupils in the Integrated Experience Approach had higher mean scores, significant at the 1% level, than pupils in the Coordinated Basal Language Arts approach on the arithmetic, social studies and science concepts and spelling subtests of the Stanford Achievement Test. There were no significant differences in word meaning, paragraph meaning, word study skills, language skills or arithmetic computation. The investigators speculated that superiority in comprehending concepts and reading in the content areas of science, social studies and arithmetic for the pupils in the Integrated Experience Approach may be attributed to the greater diversity of reading diet(?).

Pfau[80] reported a two year study designed to measure the effect of a planned program of recreational reading on the amount of interest displayed in reading. Also considered was the effect of the program on reading and spelling achievement and written and oral fluency.

One-hundred-seventy first graders were randomly selected and assigned to experimental and control classrooms in five differing socio-economic school communities. Subjects in all groups remained together throughout the two-year time span.

Approximately one hundred trade books, "easy readers," and literature books from pre-primer to grade four level were selected for use in each experimental classroom. Teachers were given extra training in recreational reading techniques and thirty extra minutes were set aside in each experimental classroom for recreational reading activities. No special materials or techniques or time allotments were used in the control classrooms.

Findings indicate that, on all measures of interest in reading, the experimental group was significantly superior to the control group. The experimental-group children made more trips to the library, withdrew a greater number of books, mentioned reading a greater number of times during a free-response interview and selected a significantly greater number of reading-oriented items when the forced-choice, *Reading Interest Inventory*, developed for the experiment, was administered.

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[79] Elaine C. Vilscek, Donald L. Cleland and Loisanne Bilka. "Coordinating and Integrating Language Arts Instruction," *The Reading Teacher*, 21 (October 1967), 3-10.

[80] Donald W. Pfau. "Effects of Planned Recreational Reading Programs," *The Reading Teacher*, 21 (October 1967), 34-39.

William D. Sheldon and Donald R. Lashinger

A Summary of Research Studies Relating to Language Arts in Elementary Education: 1967

Part II

Programs and Grouping Practices

Camper[1] compared an individual and group approach in teaching reading skills to selected intermediate grade pupils. Significant differences were found among group means as measured by the *California Reading Test* and the *Durrell Analysis of Reading Difficulty* in favor of those pupils taught individually. These pupils also demonstrated a more favorable attitude towards reading and read more books than the children taught in groups.

The effect of nonpromotion on reading achievement was measured by Dobbs and Neville.[2] The experimented matched 30 pairs of first and second grade children. Each pair consisted of a once retained first grader and a never retained second grade child. The promoted or never retained group gained significantly more in reading and arithmetic as measured by the *Metropolitan Achievement Test.*

Warner[3] conducted an experiment to determine the effect on reading achievement of instructing first grade pupils in a half day session, 8:00-12:00 or 12:00 to 4:00, a whole day 9:00 to 2:00 or a divided day when half the pupils came to school from 9:00 to 2:00 while the other half attended from 10:00 to 3:00.

The sample of 327 first grade pupils in 12 classrooms in six Los Angeles city schools was matched in intelligence of pupils, teacher preparation and experience. From the results of the *Gray Oral Reading Test,* the *Dolch Word List* and the *Gates Primary Reading Test,* it was demonstrated that the divided day group performed significantly better in most of the subtests of reading than children taught for one half or a whole day. While the study is

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[1] Virgie Lake Camper, "A Comparison of two Methods of Teaching Reading, Individual and Group, in the Teaching of Reading Skills in Combined Classrooms to Selected Fourth, Fifth and Sixth Grade Children in the Public Schools of Howard County, Maryland," *Dissertation Abstracts,* 27 (May, 1967) 3768A.

[2] Virginia Dobbs and Donald Neville. "The Effect of Nonpromotion on the Achievement of Groups Matched from Retained First Graders and Promoted Second Graders," *The Journal of Educational Research,* LX, x, (July-August, 1967), 472-475.

[3] Dolores Warner. "The Divided-Day Plan for Reading Organization," *The Reading Teacher,* Vol. 20, No. 5, (February 1967), 394-397.

quite limited and raises a number of questions concerning the administrative advantages accruing to the divided group and the positive teacher reaction for the divided grouping, it does suggest a possibility for relieving large classes and provide teachers the opportunity to teach one half their usual class for two hours each day.

An unusual study of the effects on achievement of vertical and horizontal grouping was made by Mycock.[4] The vertical group stayed with one teacher from ages 5 to 7 while those grouped horizontally had a new teacher each year. Among the areas measured during three years of the experiment were size of reading vocabulary, reading accuracy, comprehension and rate. Four English schools with population of 150-180 participated in the study. Schools were paired for locality, size, class size, staff ratio, teaching methods and quality of staffing. While no significant differences were found in vocabulary or reading achievement, the author speculated on the basis of limited evidence that the slower learning children benefited (in reading) more in the vertical than in the horizontal group.

Hawkins[5] reports a limited study by eight experienced teachers of the movement of pupils from one reading group to another and the reason for the movement. The classes were self-contained and pupils were usually divided into three groups for reading instruction. The twenty-one reasons given by teachers for moving pupils from one group to another indicated that most of the changes in grouping were based on teacher opinion with other evidence lacking for the most part. Teachers in the study could not identify particular strengths or weaknesses that would suggest that a change in group placement would contribute to a child's progress in reading.

While the study was quite limited in scope and in research technique, it did raise questions related to the evidence teachers needed for determining when children should be moved from one group to another and also whether teachers had the resources available to them for assessing the specific reading strengths and weaknesses of their pupils. The investigator suggested that research is needed to determine and test workable guide lines for aiding teachers develop flexible grouping.

The effects of a nongraded program on reading achievement were studied by Jones and Moore.[6] Fifty-two first grade pupils were assigned randomly to either experimental (N–26) or a control (N–26) groups and remained in their respective groups for two years. Teachers were prepared for participation in the experiment through workshops and received assistance from a reading consultant. Reading readiness levels were assessed for all pupils during the first two weeks of school. Nine learning levels were established for the experimental group, while the control group was divided into three groups for reading instruction. The pupils in the control group could move only within the three levels assigned. Pupils who did not achieve adequately were retained at the end of the first year while those who went to second grade were again assigned to one of three levels. For the experimental group there was no grade distinction at the end of the first year.

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[4] Mary A. Mycock, "A Comparison of Vertical Grouping and Horizontal Grouping in the Infant School," *The British Journal of Educational Psychology*, 37 (Feb. 1967) 133-135.

[5] Michael L. Hawkins. "Changes in Reading Groups," *The Reading Teacher*, 21 (October 1967), Pp. 48-51.

[6] Charles J. Jones and J. William Moore. "A Comparison of Pupil Achievement After One and One-half and Three Years in a Nongraded Program," *The Journal of Educational Research*, LXI, ii, (October, 1967), 75-77.

Instead of retaining any pupils three additional reading levels were created. This was repeated at the end of the second grade. Reading levels were created to meet the reading needs of the pupils.

Vocabulary and Word Analysis

There were a limited number of studies in this area. However, interest in vocabulary development and word analysis is still intense as reflected by the many methods and studies reported above which often compared various teaching methods and materials to word recognition and analysis within the more general program of reading.

A study by Carver[7] attempted to determine whether sounds differ in their vulnerability to analysis. The subjects studied were 154 seven-year-old boys and girls. Subjects were given seven words orally and asked to identify the initial sound. They answered by circling the correct letter from a multiple choice selection. Subjects were then asked to identify words beginning with the same consonants as in the first list, but followed by a second consonant rather than a vowel, ie: climb, please, etc.

There was a significant increase in the number of errors from the first to second set from which the investigator concluded that words as sounds differ in their vulnerability to analysis. Boys in the sample had significantly more difficulty than girls as aural difficulty of words increased.

A study conducted by Lemons[8] explored the comparative effectiveness of teaching reading in grades 1-3 using *Phonetic Keys to Reading* with 77 pupils and *Reading For Meaning* with 71 pupils. The results as obtained from an administration of the *Metropolitan and Stanford Achievement Tests* indicated that the pupils using the *Reading for Meaning* approach scored significantly better than pupils in other groups in word knowledge, word discrimination, reading comprehension, word and paragraph meaning. Pupils taught using the *Phonetic Keys* scored significantly higher in spelling and word study skills. The *Reading for Meaning* material proved most advantageous for pupils of low and medium I.Q.s and low and medium socio-economic status. The *Phonetic Keys to Reading* seemed most advantageous for pupils of both high I.Q. and socio-economic level.

Four instructional methods for teaching word recognition to disadvantaged pupils were analyzed by Jones.[9] The investigator tried to determine which method of instruction is most appropriate for teaching word recognition skills to culturally disadvantaged children. The subjects were 84 disadvantaged pupils from a nursery school, kindergarten and first grade in Philadelphia, Pa. Forty-six words were presented to each subject for 5 seconds. From these, 40 unknown words were selected for instructional purposes. Ten words were presented by each of the four methods during 15 minute periods on four consecutive days. Results indicated that method was not a significant factor in learning words. There were no significant relationships between grade level and method, or between intelligence and method. Order of method presentation was not significant.

Kinsey[10] attempted to determine words used most frequently in elementary schoolchildren's written expression and compared the results with the results of the Rinsland study of 1939. The investigator obtained writing samples from various sources from 1,100 children. It was hypothesized that there would be no difference in the frequency with which the 100, 500, 1000, 1500 and 2000 most frequently used words of the Rinsland test and the frequency of appearance of the same words in this study. Kinsey found that her sample differed significantly (.05 level) from the Rinsland sample in grades 2, 4, 5 and 6.

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[7] Clifford Carver, "The Aural Analysis of Sounds," *The British Journal of Educational Psychology,* 37 (Nov. 1967) 379-380.

[8] James Roscoe Lemons, "The Effectiveness of Two Methods of Teaching Reading in the Primary Grades," (A)Vol. 27, No. 12 (June 1967) 4048A

[9] Margaret Jane Jones, "A Comparison of Four Instructional Methods in Teaching Word Recognition to Culturally Disadvantaged Learners," *Dissertation Abstracts* 27 (May 1967) 3758A.

At the first and third grade levels the first 100 words were used significantly more often by children in the present sample. In most instances the first 2000 words were used significantly more often by the 1939 sample. It was apparent from this study that the same basic words carry a heavy load in written expression year after year and it was suggested that such words should be taught early to children for this reason.

A study of the reaction of third grade "low and middle class children" to selected words used in a social studies context was made by Bottorff. Two hundred twenty-two children noted their likes or dislikes for words presented by investigator. It was apparent that children responded favorably or unfavorably to specific words by class level and race. It was suggested that a study such as this might be helpful in guiding the writers of textual material used with pupils from varied socio-economic and racial groups on the assumption that a negative or positive reaction to words would influence success in learning.

Emans and Fisher[11] developed a series of exercises for evaluating the use of context clues and then analyzed the success of 781 pupils in grades 3-10 in using certain clues as an aid to word recognition. Pupils were presented six versions of the *Gates Reading Survey* revised as follows:

a. Form I—key word was omitted and a correct response was to be chosen from 4 choices supplied
b. Form II—the beginning and end letter of each word was given with the others omitted
c. Form III—just beginning letter was given
d. Form IV—only the vowels were omitted from the key words
e. Form V—the complete word was omitted and the line for each missing word was the same length
f. Form VI—the entire word was omitted, but the length of the line was determined by the length of the word

Form IV proved to be the most significantly useful clue, while Form V was significantly less useful than the others.

An article by Langer[12] based on research defines concepts, explains the relationship between vocabulary development and concept development, explains the sources of word concept, difficulties, and describes important studies of concepts and concept development.

Reading Achievement and Some Correlates

There are dozens of articles which in some way or other relate the significance of a specific aspect of learning, education, instruction or living to reading achievement. We present 35 of these which are representative of the widely divergent interests in reading achievement.

Mayans[13]explored the possibility of predicting reading level of pupils achieved in

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[10] Reba Vastie Kinsey, "A Comparative Study of the Written Vocabulary of Children in Florida Public Elementary Schools, Grades One Through Six," *Dissertation Abstracts*, 27 (May, 1967) 3775A-3776A.

[11] Robert Emans and Gladys Mary Fisher, "Teaching the Use of Context Clues," *Elementary English*, 3 (March, 1967) 243-246.

[12] John H. Langer, "Vocabulary and Concept Development," *Journal of Reading*, X, vii, (April, 1967), 448-455.

first grade using estimates related to cultural level of pupils as gauged by father's education and occupation. The *Metropolitan Readiness Test* was found to be a useful predictor of the future reading achievement of all groups of children and early testing and grouping of children by cultural level is suggested in order to provide sound instruction of a compensatory nature. The study failed to describe the type of kindergarten and first grade programs utilized, but like others, suggests that early testing might be useful in guiding the development of preventative programs for culturally disadvantaged pupils.

A summary and discussion of research concerning creative understanding in reading is presented by Covington.[14]

From the sketchy data provided we can draw the conclusion that children who are instructed in drawing inferences from their reading are more adept in using information to guide their thinking and to test validity of their ideas than those who are not specifically instructed. Instructed children were able to detect factual discrepancies and use them in solving problems presented in mystery stories. The study suggested that children can benefit from direct instruction in inferential reading in spite of low reading ability if reading material is adjusted to reading level.

Ryan and Torrance[15] attempted to determine whether exercises which lead to growth in elaboration would be accompanied by growth in reading ability. The study involved 7th grade boys and girls enrolled in remedial and developmental reading classes. During the experiment emphasis was on elaboration of what was read by writing new endings for stories, acting out stories, panel discussion, etc. Significant growth in reading, comprehension, graph reading and reference skills accompanied growth in ability to elaborate.

A study by Thatcher[16] attempted to determine whether children taught by basal reader methods or by an individualized approach profited most in growth in tested creativity and problem solving. Results as measured by a test of creativity and problem solving ability developed by Torrance and Covington suggests that 5th and 6th grade pupils in an individualized reading program will perform as well as those in a basal reading program on the tests.

Sister Mary Julia MacDougall[17] attempted to determine if there is a significant relationship between the critical reading ability and creative thinking ability in intermediate grade boys and girls. The experimental classes received instruction in specific critical reading skills while the control groups were enriched through children's books. Tests of critical reading, creative thinking, reading and intelligence were administered and revealed a low but significant correlation between critical reading and creative thinking for pupils in grades four and five. An overall analysis of test results suggested that measurement instrument of creative thinking and critical reading needed improvement in order to identify both skills in a more discrete manner. Further research is needed to determine whether critical thinking is inherent in critical reading and whether instruction

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[13] Anna E. Mayans, "Early Differential Prediction of First Grade Reading Achievement Among Three Culturally Different Kindergarten Groups," *Dissertation Abstracts* 27 (March, 1967) 2891A-2892A.

[14] Martin V. Covington, "Some Experimental Evidence on Teaching for Creative Understanding," *The Reading Teacher,* Vol. 20, No. 5 (February, 1967) 390-396.

[15] Eunice G. Ryan and E. Paul Torrance, "Training in Elaboration," *Journal of Reading,* XI, i, (October, 1967), 27-32.

[16] David A. Thatcher, "Reading Instruction, Creativity, and Problem-Solving," *The Reading Teacher,* 21 (December 1967) 235-240+.

in critical reading can foster creative thinking.

Even though a study of phrase reading by Amble[18] was difficult to read and lacked certain relevant information, the results seemed to justify comment and further inquiry. The author attempted to present the theoretical and practical implications of phrase reading training for reading instruction. In three consecutive experiments the researcher studied the significance in terms of reading of training pupils using the *Phrase Reading Film Series—Intermediate Grades*. Findings indicated that phrase reading training may increase perceptual span, reading comprehension and reading rate. Skills acquired seem to be maintained. The reader was concerned whether or not there was a high correlation between the film series material and the criterion tests used to measure results. A question was also raised as to whether training in phrase reading should be restricted to a filmed presentation or whether other approaches might prove of equal value.

Flatte,[19] in a somewhat related study attempted to determine the effect of tachistoscopic training on reading rate.

Twenty-six pupils received thirty 20-minute tachistoscopic lessons over a period of ten weeks while an equal group of pupils received reading instruction without tachistoscopic training. Post-testing revealed no difference in rate or comprehension between the two groups. While this particular study was not particularly important it is interesting to note that experimentees continue to be concerned about ways of increasing reading rate using mechanical means.

Another study made to determine whether rate of reading of 5th grade pupils can be increased and whether comprehension level is effected was conducted by Griffin.[20] Using specific materials aimed at increasing rate of reading Griffin found that purpose seemed to determine rate, rate was increased significantly without use of machines and comprehension was not reduced significantly when rate increased.

Reading Versatility, a new label for Reading Flexibility, was a study by Metsker.[21] The purpose of the investigation was to determine the relationship between reading versatility and other reading skills and mental ability. A variety of reading and intelligence tests and a test of Reading Versatility were administered to a population of sixth grade pupils living in a high socioeconomic suburb and a metropolitan area. The results indicated that children with higher mental ages read more rapidly but were not able to skim and scan with comprehension. Children who performed well on general reading test comprehended well in skimming and scanning. Children who comprehend well are no more versatile than those who do not comprehend.

A study by Yule[22] to determine the reliability of the *Neale Analysis of Reading Ability* in assessing reading retardation

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[17] Sister Mary Julia MacDougall, "Relationship of Critical Reading and Creative Thinking Abilities in Children," *Dissertation Abstracts*, 27, (May, 1967) 3779A.

[18] Bruce R. Amble, "Reading by Phrases," *California Journal of Educational Research*, 18 (May, 1967) 116-123.

[19] Earle Edward Flatte, "The Influence of Individualized Eye-Span Training With Digits on Effective Reading Rate," *Dissertation Abstracts*, 27 (April, 1967) 3221A.

[20] Vernon Haywood Griffin, "A Study Designed to Investigate Some Aspects of Forced Increase in Rate of Reading on the Reading Comprehension of a Selected Group of Fifth Grade Pupils." *Dissertation Abstracts*, 27 (March, 1967) 2729A-2730A.

[21] Carol Jo Metsker, "Reading Versatility: A Study of Reading Rate and Comprehension in Grade Six," *Dissertation Abstracts*, 27 (May, 1967) 3630A-3631A.

when correlated with intelligence was conducted on 160 randomly selected children from the total school population of the Isle of Wight. The short form of the WISC (Maxwell 1959) was used to assess intelligence. Researcher found that test, retest correlations were all significant (P=.001), that accuracy and comprehension scales of the reading test are stable and that the large standard error of estimate for rate makes it too unstable for use in individual prediction. From the data it is possible to indicate the size of the discrepancy between measured and predicted reading ages occur in various percentages of the standardized sample at each end of the reading continuum.

Hall and Waldo[23] conducted an interesting study of the effect of a special reading program contrasted to a standard program on improving the reading of sixth grade youths assessed as prone to future deliquency. Pupils in the special reading groups showed greater improvement at all levels of intelligence over control groups. Pupils in highest IQ category (110 and above) showed most reading improvement, but pupils in lower IQ category (79 and below) were second in reading improvement. As in other studies of its type it was demonstrated that a program for poor readers which attempts to highlight reading instruction and provide materials other than those ordinarily used in the usual classrooms can help pupils grow significantly in reading.

Walker[24] assessed the effectiveness of instruction in a reading clinic by grade levels and found that grade placement (Grades 3-6) was not a significant factor in remediation and reading achievement as measured by oral reading was higher for I.Q. group above median than for those below. This study is of interest to those who are attempting to determine the optimal grade level at which remedial reading instruction can be provided.

Reed[25] investigated the relation between differences in WISC Verbal and Performance I.Q. values and reading achievement for six- and ten-year old pupils drawn from three public schools in a metropolitan suburb. Significant differences in reading achievement among groups were found at C.A. 10 but not at C.A. 6. There was no evidence to suggest that the intellectual pattern as derived from the WISC could serve as a means of identifying children who might become reading problems. The results suggested that relationship of I.Q. to reading performance is dependent on stage of development.

Herman[26] attempted to determine the percentage of time spent by elementary school children in schools populated by pupils of a limited socio-economic background, in listening, speaking, reading and writing, while engaged in a social studies program. He found that 76.5 per cent of the class time was spent in oral communication, 12.9 per cent in reading and 1.8 per cent in writing. Classes with below average pupils listened to the teacher twice as much as those with above average pupils. The above average classes engaged in significantly more reading than other classes. The re-

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[22] William Yule, "Predicting Reading Ages on Neale's Analysis of Reading Ability," *British Journal of Educational Psychology*, 37 (June, 1967) 252-255.

[23] Nason E. Hall and Gordon P. Waldo, "Remedial Reading for the Disadvantaged," The Journal of Reading, XI, ii, (November, 1967) 81-92.

[24] Billy Wayne Walker, "Effectiveness of a Reading Clinic by Levels," *Dissertation Abstracts*, 27, (March, 1967) 2756A.

[25] James C. Reed, "Reading Achievement and Related to Differences Between WISC Verbal and Performance I.Q.'s," *Child Development*, 3 (Sept. 1967) 835-840.

search made obvious the long-held suspicion that below average pupils have less opportunity to develop skills of reading and writing in the classroom and hence increase their language deficits rather than decrease them.

In a study[27] investigating the effect of teachers encouraging second and third grade pupils to work more accurately or to work more rapidly during test taking, it was found that those pupils who were encouraged to work more accurately did achieve a higher rate of items correct to items attempted than the group encouraged to work more rapidly or a control group which was not encouraged to work either more rapidly or accurately. The group encouraged to work more rapidly did attempt more items than the accuracy or control group. In spite of the apparent differences in test performance the differences in mean scores were not statistically significant across the treatments. The investigator did not limit size of sample and shortness of testing period and the suggestion that girls may be more affected by encouragement in the number of items attempted than are boys.

Landry[28] attempted to determine whether the following organizational aids would affect reading comprehension and recall:

(1) questions and problems identified in the introduction
(2) questions and problems identified in the introduction and summary
(3) questions and problems identified in the introduction, summary and written text

Three hundred fourteen pupils were assigned at random to three treatments and one control group and read selections silently, were tested immediately for recall and were tested seven days later for recall. Analysis indicated that none of the organizational aids in themselves had a significant effect on reading comprehension, immediate recall or delayed recall. We can only assume that differences might have been established if treatment groups had been aided in profiting from the particular material they used. The study also suggests that it cannot be taken for granted that directions found within material are noted or followed by the reader.

Connor[29] attempted to clarify the relationship between perceptive-motor skills as measured by *Bender Visual-Motor Gestalt Test* using Koppitz scoring system and differentiated reading performance of second grade children measured by *California Reading Tests.*

The population tested were 30 boys and 30 girls ranging in Stanford Binet I.Q.s of 91-122 and C.A.s between 7 yrs. 5 mos. and 8 yrs. 5 mos. One-half the population were designated as good readers, the other half as poor readers.

The Bender performance revealed no significant relationship between reading performance and Bender measures of rotation, integrations or perseverations. A significant difference ($p=<.01$) was found between reading performance and Bender distortion scores and the Bender test total scores ($p=<.05$). No significant differences were found between sexes on any of the

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[26] Wayne L. Herman, Jr., "The Use of Language Arts in Social Studies Lessons," American Educational Research Journal, 4 (March, 1967) 117-124.

[27] George S. Lamb, "Teacher Verbal Cues and Pupil Performance on a Group Reading Test," Journal of Educational Psychology, LVIII, vi, (December, 1967) 322-336.

[28] Donald Lyle Landry, "The Effect of Organizational Aids on Reading Comprehension," *Dissertation Abstracts*, 27 (April, 1967) 3228A-3229A.

[29] James Paul Connor, "The Relationship of Bender Visual-Motor Gestalt Test Performance to Differential Reading Performance of Second Grade Children," *Dissertation Abstracts* (A), Vol. 28, No. 2 (Aug. 1967), 491-2A.

Bender tests and differential reading performance.

This study, while limited in scope, suggests a need for replication as reading specialists continue in their concern about the relationship between perceptual-motor skills and reading ability.

An interesting study of the relationship of lateralized finger agnosia and reading achievement conducted by Reed[30] yielded interesting but limited results due to the small and uneven samples of pupils. The investigator hypothesized that the reading achievement of six-year-olds who made more errors on the left hand than on the right would be lower than those who made more errors on the right hand than on the left. The same hypothesis was made for ten-year-old pupils. An analysis of reading test scores and the errors made on a test of finger localization indicated no significant differences between reading achievement and finger localization errors at the six-year-old level. At the ten-year-old level the group with predominance of right hand errors read significantly less well than group with majority of left hand errors. Investigator suggested that among normal children a right hand finger localization deficit is associated with limitations in the development of proficient reading.

Calder[31] investigated the effects of certain aspects of programmed instruction used to supplement a fifth grade basal reading program on reading achievement. The researcher hypothesized that pupils using self-directed reading materials as a supplement to basal readers will make greater gains in reading than pupils using basal reading materials exclusively. It is also hypothesized that the pupils using the self-directed materials will also develop a better attitude towards reading than the other pupils.

An experimental and control group of approximately 30 pupils each, equated on intelligence, reading and listening ability were given identical basic reading instruction from 4-40 minute periods a week. The experimental group used self-directed reading materials for 27 weeks during their independent reading time. Both control and experimental groups were encouraged to read books from classroom and school libraries. A standard reading test and an interest inventory were used in pre- and post-testing. Both experimental and control groups made significant gains in reading achievement. The attitudes of the experimental group toward reading changed significantly while there was no change for the control group.

The experimenter was encouraged by the changed attitude of the experimental group and their consequent improvement in motivation, enthusiasm and self-confidence. It seemed obvious from this study that these pupils profited in their attitudes towards reading when aided by an enthusiastic teacher providing interesting materials.

In an investigation of linguistic unit size in memory processes, Wilson tested third grade pupils on the hypotheses that:

(1) In an immediate memory task a 3-word phrase should be recalled as often as a single monosyllabic word and a string of 3 words not syntactically related should be recalled less frequently than the other 2.

(2) Imbedding the stimulus word in a non-syntactic string should depress the probability of recall.

Wilson[32] found that phrases were recalled more frequently than non-syntactic strings, but not more frequently than single words and that phrase structure did not facilitate recall of embedded word. The probability of recall of single words was significantly higher when presented alone. Nouns were more easily recalled than verbs. Reading performance was highest during intervals associated with recall of single word and lowest during intervals associated with

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[30] James C. Reed, "Lateralized Finger Agnosia and Reading Achievement at Ages 6 and 10," *Child Development*, 1, (March, 1967) 213-220.

[31] Clarence R. Calder, Jr., "Self-directed Reading Materials," *The Reading Teacher*, 21 (December, 1967), 248-252.

McLeod[33] endeavored to analyze some of the automatic-sequential level skills pertinent to severe reading disability in three consecutive experiments. The population studied was 46 second grade pupils, half of whom had been referred to a reading clinic, and were reading one year below expectancy, had no serious auditory or visual defects of evidence of exogenous causes of their reading disability, while the other half were chosen at random. In experiment I, children reproduced in writing tachistoscopically presented letter sequences. The control group was superior to experimental at the .001 level of significance. The experimental group improved with redundancy but were still significantly inferior in their responses to the controls.

Experiment II presented words auditorically in context while pupils listened through stereophones. Speech and noise stimuli were controlled. The control group performed significantly better at the .05 level. It was apparent that the store of auditory linguistic units in pupils is far more highly developed than the store of visual signal patterns.

Experiment III examined the effect of intra-word redundancy on auditory perception. A test involving reproduction and one involving discrimination were taped and material was presented to pupils in a manner similar to that of Experiment II. There were no significant differences between groups in response to test involving reproduction. Controls performed significantly better on the test involving discrimination. There seems to be no difference between good and poor readers in their ability to recognize words and nonsense syllables, but there is a significant difference in their ability to recognize isolated sounds.

Marlin[34] examined the degrees to which fluency and reading speed could be improved over time under conditions of delayed auditory feedback, when variations in task difficulty have their origin in syntactic, semantic and sequential properties of the material read. It was found that the primary disruptive effect of delayed feedback is exerted at the level of motor skill integration; disruption is greater for highly integrative skills, and syntactic considerations are more important in performance under these conditions than semantic considerations in the material read.

Ford[35] studied the relationship of auditory—visual and tactual-visual integration to intelligence and reading achievement with a population of 121 white, middle-class fourth grade boys and found that auditory-visual integration as measured by Kahn was significantly related to both silent and oral reading ability and to intelligence. The relationships with reading lost significance, however, when intelligence was held constant. Tactual-visual integration (as developed by Buchner) was not found to be significantly correlated with either read-

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[32] Harlalee Allen Wilson, "An Investigation of Linguistic Unit Size in Memory Processes," *Dissertation Abstracts*, 27 (April, 1967) 3327A.

[33] John McLeod, "Some Psycholinguistic Correlates of Reading Disability in Young Children," *Reading Research Quarterly*, II (Spring, 1967) 5-31.

[34] Marjorie Jean Martinson Marlin, "Response to Delayed Auditory Feedback is Related to Sequential, Syntactic, and Semantic Constraints," *Dissertation Abstracts*, Vol. 27, No. 11 (May 1967) 4146B.

[35] Marguerite Prentice Ford, "The Relationship of Auditory-Visual and Tactual-Visual Integration to Intelligence and Reading Achievement," *Dissertation Abstracts* (a) Vol. 28, No. 2 (Aug. 1967) 493-4A.

ing ability or intelligence. Other aspects of this study, too detailed for inclusion, deserve the perusal of those interested in Auditory-Visual and Tactual-Visual integration and aspects of learning and intelligence.

In a very interesting study to determine whether there is a relationship between laterality patterns and reading ability in a clinic population with diagnosed learning disabilities and associated cerebral dysfunction, Capobianco[36] found no significant relationship. Because of the many conflicting claims derived from research and observation, it would seem important that this area of study deserves replication with a number of clinical and nonclinical subjects.

In a replication of a former study, Rudnick, Sterritt and Flex,[37] explored the relationship of auditory and visual rhythm perception and reading ability. Using a population of 36 third grade boys from a middle class suburban school, the research team administered visual, auditory and visual auditory tapping pattern tests which demanded a response of choosing a printed dot pattern in each instance.

When compared with the fourth grade pupils in the previous study, the third graders were found to be significantly lower in C.A. and M.A. Third graders made more errors than fourth on Auditory and Visual Tests, but demonstrated no difference in errors on Auditory-Visual Test. Mental ages on auditory and visual tests were significant independent predictors of reading achievement.

The range of scores on perceptual tests was not greater for third than fourth grade pupils.

The prediction of reading scores from perceptual tests was less good for third graders than for fourth.

Study suggested that with age visual perceptual ability decrease in importance to reading but auditory perceptual abilities and transposition between becomes significant.

Weathers[38] compared the visual perceptual status of thirty one adequate and thirty one inadequate fifth grade boys and girls. Using the *Stanford Achievement Tests of Reading* to classify her population as adequate or inadequate readers and the *Frostig Developmental Test of Visual Perception* as a measure of perceptual status. Weathers found that "Reading Skills" showed a positive relationship to visual perceptual development.

A study investigating the relationship between the word recognition skills of 4th grade pupils and perceptual ability was reported by Chirhart.[39] The study compared the results of a test measuring word recognition skills and a variety of tests and subtests which purported to measure perceptual ability. It was found that some perceptual tests relate more highly to word recognition skills than others. For example, pattern completion correlated most highly while spatial task had the lowest correlation. When subjects are grouped according to their phonics knowledge, there are significant differences in perceptual skills.

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[36] R. J. Capobianco, "Ocular-Manual Laterality and Reading Achievement in Children with Specific Learning Disabilities," *American Educational Research Journal,* 4 (March, 1967) 133-138.

[37] Mark Rudnick, Graham M. Sterritt, and Morton Flax, "Auditory and Visual Rhythm Perception and Reading Ability," *Child Development,* 38 (June, 1967) 581-587.

[38] Lillian Louise Weathers, "A Comparison of Visual Perceptual Development and Reading Achievement of Fifth Grade Adequate and Inadequate Readers," *Dissertation Abstracts,* 27 (March, 1967) 2756A-2757A.

[39] Virginia J. Chirhart, "A Study of the Word Recognition Skills and Perceptual Abilities of Fourth Grade Pupils," *Dissertation Abstracts,* 27, (May, 1967) 3609A.

Jones, Lundsteen and Michael[40] compared the reading and level of need achievement of 26 sixth grade pupils whose mothers pursue a professional career with 26 pupils whose mothers are full-time homemakers. The examiners administered the McClelland n-Achievement Test, the STEP (Reading), a parent questionnaire and an intensive interview with a sub-sample of parents in collecting information. They found that children of professional mothers scored significantly higher on STEP $p<.001$. The mean difference on the McClelland was not significant but favored the professional group. In view of a lack of certain information, the fact that professional mothers were better educated than the homemakers and the difference in size of libraries. It is suggested that this study be replicated to determine whether or not more comparable mothers in terms of education and interests might yield different results. It has been suggested that the absence of the mother from home, or the working mother influenced school achievement negatively. This study would not indicate this, however.

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[40] Jack B. Jones, Sara W. Lundsteen, and William B. Michael, "The Relationship of the Professional Employment Status of Mothers to Reading Achievement of Sixth-Grade Children," *California Journal of Educational Research*, 18 (March, 1967) 102-108.

Johnson[41] examined the manner in which the comprehension of pupils in grades 4, 5 and 6 is affected by their attitudes towards certain thematic content. The pupils in the study were distributed over the entire range of reading ability, intellectual level and attitudinal range. Stories used were classified according to three themes:

1. anthropomorphic—success stories of animals having human virtues
2. victorious underdog
3. character with culturally-alien attributes

An attitude inventory was constructed for each theme. Comprehension tests entailing literal and interpretative questions were developed for each story. The variables of sex, chronological age, school, grade level, socio-economic status and measured intelligence significantly affected the relationship between attitude and comprehension. Significant difference in total comprehension cannot be attributed to differences in attitudes but significant differences in literal and interpretative scores can be attributed to differences in attitudes.

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[41] Joseph Carlton Johnson II, "A Study and Analysis of the Relationships at the Intermediate Grade Levels Between Attitude as Reflected in Certain Thematic Content and Recalled Comprehension of That Content," *Dissertation Abstracts*, 27, (April, 1967) 3368A-3369A.

More than five thousand primary grade pupils were studied by Aaron, Callaway, Hicks and Simpson[42] to determine the relationship of children's interests to reading gains in a summer remedial reading program.

Pre- and post-tests of reading measured the status and reading achievement of pupils during the summer remedial program while an interest inventory was administered during the first week of lessons. There were no consistent patterns found in the results. The answer to "How much do people read to you?" was significantly related to Primary Paragraph Reading and results of the Informal Reading Inventory. Children with hobbies gained significantly more as measured by Paragraph Reading and the Informal Reading Inventory than those who did not. Number of books owned by children was related to significant gains in reading. Children who watched TV in moderation made more reading gains than those who expressed extremes.

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[42] Iron E. Aaron, Byron Callaway, Randall Hicks, and Hazel D. Simpson, "Reading Achievement in a Summer Reading Program," *Elementary English* 44 (Dec. 1967) 875-882.

Using 86 pupils drawn at random from a population of 578 sixth graders Lundsteen[43] analyzed the interrelationships between reading, listening and qualitative thinking in problem-solving. STEP reading and SCAT scores were obtained for all pupils in the study and all pupils were administered four unfinished stories dealing with social relationships. Each story was followed by 12 multiple choice questions dealing with main problem, sub problem, definitions, etc. Half the stories were read by pupils, the other half were listened to by the students. Subscores of abstract, functional and concrete levels in the problem-solving questions along with STEP and SCAT scores were factor-analyzed.

Lundsteen found that listening and reading for problem-solving r .39, Reading while problem-solving and STEP reading 4 .59, listening while problem-solving and STEP reading 4 .29. The highest correlation between reading and listening when paired according to abstract, functional and concrete was at the concrete level, 4.31. The most positive correlations between standardized tests (STEP and SCAT) and the experimental measures was at the abstract level. Four verbal factors were identified in problem-solving:

abstract reading ability
concrete listening ability
functional listening ability
functional reading ability

There was a relatively low *r* between reading and listening variables and a low association between abstract, concrete and functional levels. There was a high association between abstract problem reading, reading achievement and general scholastic aptitude.

Drake[44] attempted to ascertain the effectiveness of the Dale-Chall formula in the prediction of success with technical and non-technical materials by seventh grade students. One hundred fifty two students matched on sex, reading ability, scholastic aptitude and divided into high-average and low ability paired groups. Subjects read a technical test as pre-test, read technical material at 10th or 5th level of readability, completed a technical test as post-test after reading technical material, completed technical test in four weeks and a similar sequence was followed for non-technical materials.

The results suggested that rewriting technical and non-technical material did not significantly improve possibility of higher comprehension, retention or reading speed. Learners understood and recalled non-technical material more readily than technical material. Girls were more successful with non-technical content; boys with technical content. The study has interesting implications for teachers of content (technical) material and also suggests that the reading of technical materials by girls need special consideration. The question is raised again concerning the adequacy of using standard readability formulas in assessing level of complexity of reading material.

An interesting study which compared the oral reading of a group of Scottish and American children was reported by Elder.[45] The purpose of the study was to ascertain whether Scottish children obtained an advantage over American children by being introduced to reading at the age of five rather than six and by receiving a greater emphasis upon phonics in beginning reading. The children in the sample were seven and eight years old in the second or third grades. The Scottish children were superior in word pronunciation ability. However, the Scottish pupils read more slowly and did not use context clues as well as American pupils. The early start seemed to give Scottish children an initial advantage. However, there is some question related to the persistence of the advantage.

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[43] Sara W. Lundsteen, "Listening, Reading and Qualitative Levels of Thinking in Problem Solving," *California Journal of Educational Research*, 18 (November, 1967) 234-237.

[44] Lawrence Coleman Drake, "The Effectiveness of a Selected Readability Formula in the Prediction of Student Success with Technical and Non-Technical Reading Materials," *Dissertation Abstracts*, 27 (March, 1967) 2937A.

Neville, Pfost and Dobbs[46] tested the hypotheses with 54 boys aged 7-14 in grades 3-9 that high test anxiety has an increased relationship to vocabulary and comprehension gain. Prior to instruction in a six weeks summer reading program the subjects were given tests of intelligence, vocabulary, reading and a Test Anxiety Scale. At the end of the instructional program a parallel reading test was administered. Subjects were divided into three groups according to their anxiety test scores. Testing revealed no significant differences among the three anxiety levels in vocabulary gains, but significant differences $p > .01$ in comprehension. It was suggested that study is needed to develop programs which will minimize negative effects of anxiety on learning.

A study by Mitchell[47] attempted (1) to determine whether or not fourth grade children can answer the questions on a standard test without reading the selections and (2) to determine how successful adults are in anticipating which questions can be answered by pupils without reading the selections. The subjects were 480 fourth grade pupils in a suburban school system.

The pupils were divided into two groups with the experimental group given questions without accompanying reading selections and the control groups were tested normally.

The results indicated that a high percentage of items were answered correctly by the experimental group—at rates higher than expected by chance.

By observing patterns teachers may often determine if child is reading or guessing when answering test questions. Adults seem to be able to anticipate which items can be answered without reading. While the results are tentative and not very specific the topic is one which could provide a fruitful area of research.

Sutherland[48] in attempting to obtain evidence concerning the factorial nature of reading tests administered five standardized reading tests to 250 fifth grade pupils. The resulting scores were factor analyzed by a principal axes method and rotated according to the varimax criterion, maintaining orthogonality. Test items were then classified according to the "Taxonomy of Education Objectives."

The California Reading Test and selected reference tests from the "Semantic," facet of Guilford's "Structure of Intellect" battery were administered to 250 seventh grade pupils and the scores factor-analyzed.

The findings were not unlike those of prior studies and revealed that reading tests were heavily loaded on one factor. The vocabulary and comprehension subtests of each test were quite similar in factorial composition. Regrouping the items according to the "Taxonomy" failed to produce any meaningful factors. The California Vo-

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[45] Richard Duncan Elder, "A Comparison of the Oral Reading of Groups of Scottish and American Children," *Dissertation Abstracts,* 27 (March, 1967) 2875A.

[46] Donald Neville, Philip Pfost, and Virginia Dobbs, "The Relationship Between Test Anxiety and Silent Reading Gain," *American Educational Research Journal,* 4 (January, 1967) 45-50.

[47] Donald Warren Mitchell, "A Comparison of Children's Responses to an Original and Experimental Form of Subtests GS and ND of the Gates Basic Reading Tests," *Dissertation Abstracts,* 28 (September, 1967) 970A-971A.

[48] Samuel Philip Sutherland, "A Factor Analytic Study of Test Designed to Measure Reading Ability." *Dissertation Abstracts* (A) Vol. 27, No. 126 (June, 1967) 4141A.

cabulary subtest was loaded heavily on the factor "verbal comprehension" while the California Comprehension subtest was loaded most heavily on the factor "verbal comprehension" with small loadings on "general reasoning" and "cognition, semantic classes."

The largest source of variance could be attributed then to one factor "verbal comprehension." This research as prior research suggests a need for understanding of the factors which underlie the reading process before successful and differentiating reading tests can be constructed. It also seems to suggest that rather than attempting to make diagnostic use of separate vocabulary and comprehension sub-scores that whole scores which simply suggest overall verbal comprehension be used.

Interests and Literature

A study by Bridges[49] to determine what kinds of poems appealed to boys and girls was carried on in 44 classrooms of 4th, 5th and 6th grades enrolling 1114 pupils. Using Poetry Rating Sheets for determining children's choices and teacher's observations of children's reactions, 44 teachers read 200 poems (25 a week) to their classes. After two readings, pupils rated poems according to a scale on the first *Poetry Rating Sheet*. On a voluntary basis children answered three questions about each poem. Summaries were made of teachers' and children's ratings, as well as children's voluntary responses. The 25 favorite poems of 4th, 5th and 6th grades were ranked. Results indicated a significant correlation between boys' and girls' preferences, between ratings of 4th, 5th grade pupils, between 5th and 6th grade pupils and between 4th and 6th grade pupils. A significant correlation was found between children's and teachers' ranking of poems. Preferences were for poems related to children's experience, with humor and for those having strength of rhythm and rhyme.

Miller[50] conducted a study of the reading tastes of 3,212 intermediate grade pupils in the Lamar, Texas area. A questionnaire of 40 items was administered to gather information. It was found that reading and sports shared the top spot as favorite hobbies. Favorite adult magazines were *Life, Reader's Digest* and *Look*. Boys read magazines to a greater extent than girls. Children's magazines were read regularly by 71 per cent of the sample; newspapers were read by 89 per cent of sample, while 77 per cent read comic books—boys to a greater extent than girls. Twice as many boys as girls disliked reading books. More than half reported reading a book after seeing it on television or as a movie. Ninety-one per cent had read a book a second time while 54 per cent received books from a book club.

It would seem apparent that TV and movies don't effect the extent of children's reading, but do effect their taste. Comic books seem to have declined in popularity. Story content is a most important consideration in selecting books.

A survey of children's interests in stories that involve developmental task situations was conducted with 1500 fifth and sixth grade pupils by Worley.[51] A jury screened two basal reader stories for five developmental task areas, ie: (1) achieving an appropriate dependence-Independence pattern, (2) achieving a giving-receiving pattern of affection, (3) relating with social groups, (4) developing conscience and morality, (5) learning one's psycho-social-sex role. An interest inventory was devised to assess the pupil's expressed interests in specific story situations.

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[49] Ethel Brooke Bridges, "Using Children's Choices of and Reactions to Poetry as Determinants in Enriching Literary Experience in the Middle Grades." *Dissertation Abstracts*, 27, (May, 1967) 3749A

[50] Arthur Luther Miller, "A Study of Reading Tastes of Children in Grades Four, Five, and Six in Selected Schools of the Lamar Area School Study Council," *Dissertation Abstracts*, 27, (March, 1967) 2741A-2742A.

[51] Stinson E. Worley, "Developmental Task Situations in Stories," *The Reading Teacher*, 21, (November 1967), 145-148.

A rank order comparison made between presence of developmental task situations and interests in stories correlated .81 at the fifth grade level and .84 at the sixth grade level. In most of the stories, the control character was a boy and the plot reflected male activities. At both grade levels (5 and 6) there were twice as many male as female story situations. The interest of boys and girls to stories are practically identical. It was obvious that boys and girls are interested in stories which help them with their developmental tasks.

Burgdorf[52] assessed the ability of intermediate grade children to draw inferences from literature by studying 432 children divided equally among grades 4, 5 and 6 and distributed in school representing widely different socio-economic status.

The children were divided randomly into two groups. Group I read the selections, while Group II listened as the selections were read to them. Children were then interviewed individually about each selection on such points as the purpose or intent of author, setting, style etc.

Results indicated that inference scores were significantly higher when children listened to stories. Ability to draw inferences increased with grade levels. There were no significant sex differences. M.A. was related significantly to inference. Vocabulary and comprehension scores were related to the literary score of children who read selections, but not to group who listened (.05). There was no significant correlation between socio-economic level and literary scores.

One of the growing studies of the place of minority Americans in children's literature is that of Gast[53] who hypothesized that stereotypes of American minorities are not found in children's literature, that recent literature dignifies the differences in race, creed and customs of minority groups and that recent literature emphasizes similarities in behavior patterns, attitudes and values among minority and majority Americans.

Gast studied 42 children's fictional books published between 1945-1963 about American Indians, Chinese, Japanese, Negroes and Spanish-Americans.

As a result of the analysis by three coders of the characteristics of characters and the implicit and explicit concepts in the stories, it was concluded that this relatively recent body of children's literature contains stereotypes complimentary to present-day minority groups and is more complimentary when compared with literature analyzed in previous studies.

In another study of textbooks, Waite, Blom, Zimet and Edge[54] analyzed first-grade reading text books to test these hypotheses:

(1) Activities depicted in stories more frequently involve children under six years of age.

(2) Activities are most frequently female oriented.

(3) Masculine activities end in failure more frequently than feminine activities. The selection of material was based on

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[52] Arlene Bernice Burgdorf, "A Study of the Ability of Intermediate-Grade Children to Draw Inferences from Selections of Children's Literature," *Dissertation Abstracts*, 27 (January, 1967) 2003A-2004A.

[53] David K. Gast, "Minority Americans in Children's Literature," *Elementary English*, I (January, 1967) 12-23.

[54] Richard R. Waite, Gaston E. Blom, Sara F. Zimet, Stella Edge, "First-Grade Reading Textbooks," *The Elementary School Journal*, 7 (April, 1967) 366-374.

Hollins "A National Survey of Commonly Used First-Grade Readers."

Hypothesis one and two are not supported by the data. The findings supported hypothesis three. The series from which the original hypotheses were derived were published in the 1950s. Since 1961 a noteworthy shift in activities appropriate for older children were found. Apparently the readers published since 1961 are more generally acceptable in terms of their appeal to boys and in rewarding masculine activities.

Hobson[55] analyzed selected third-grade reading textbooks which were adopted in Texas for the years 1966-1967 to determine extent to which Lasswell's system of values —*power, respect, wealth, enlightenment, affection, skill, rectitude* and *well-being* is present in the texts.

The results of the analysis gave the order of values as they appeared in the ten books examined as *rectitude, well-being, skill, power, enlightenment, respect, wealth* and *affection*.

Some linguistic features of five literature books were analyzed by Davis and Seifert[56] using such linguistic measures as number, length and structure of communication units, structure of communication units, movables and subordinating structures. The books analyzed were found to be linguistically consistent with the development of children for whom the books were written. Author suggested that a linguistic analysis of children's literature might replace the use of readability formulas.

Special Problems and Reading

This last section contains a variety of studies on widely different topics, but related to special problems of interest to the reading specialist.

Wilderson[57] conducted an exploratory study of reading skill deficiencies and psychiatric symptoms in emotionally disturbed children. The population was drawn from a group of children aged 9-14 who had been referred to a Children's Psychiatric Hospital for evaluation of emotional disorders.

Children were administered an oral reading test, "the *WISC* and a complete battery of psychological tests. Low but significant correlations were found between the following psychiatric and reading factors:

Schizoid withdrawal and perceptual efficiency (negative)
Schizoid withdrawal and memory character disorder and intellectual maturity (negative)
Character disorder and hyperactive style
Borderline psychosis and visual efficiency
Somatic complaints and visual efficiency

It was concluded that problem readers may be classified according to a restricted number of psychiatric syndromes and a restricted number of reading deficiency clusters. However, the correlation between psychiatric and reading factors is not large enough to make prediction practical.

Graubard[58] studied the use of the *Peabody Picture Vocabulary Test* in the prediction and assessment of reading disability in disturbed children. Correlations were run between the PPVT and such measures of scholastic achievement and decoding test as the *WISC*, the *Metropolitan Achievement Test* and the *Illinois Test of Psycholinguistic Ability* to obtain congruent and concurrent measures of validity of the PPVT and to examine the *Peabody* to determine its unique contribution to the assessment of intelligence. The Peabody correlated well with the WISC Verbal and Full Scale I.Q. The WISC, however, had a higher correlation with a measure of reading achievement than did the PPVT. The Peabody did not correlate significantly with the auditory and visual decoding tests of the ITPA. It did correlate significantly with the auditory, vocal and visual motor association scores which tap ability to scan, relate and select linguistic symbols. Because of PPVT's failure to correlate with receptive measures, its contribution to the assessment of intelligence is questioned. Because of its lack of correlation with relevant measures, it is suggested that its statistical soundness and diagnostic value are limited.

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[55] Stanley Preston Hobson, "A Value Analysis of Selected Elementary Reading Textbooks," *Dissertation Abstracts* (a), Vol. 27, No. 12 (June, 1967) 4040A.

[56] O. L. Davis, Jr. and Joan G. Seifert, "Some Linguistic Features of Five Literature Books for Children," *Elementary English*, 44 (Dec. 1967) 878-882.

[57] Frank B. Wilderson, Jr., "An Exploratory Study of Reading Skill Deficiencies and Psychiatric Symptoms in Emotionally Distrubed Children," *Reading Research Quarterly*, II, (Spring, 1967) 47-73.

A study to test the hypothesis that minimally brain-damaged children are more distractibie than non-brained injured children was conducted by Browning[59] in a series of three experiments. The findings suggest that brain-damaged children are not more distractible than normal children when differences in intelligence level are controlled statistically suggesting perhaps that intelligence is more relevant to distractibility than so called minimal brain-damaged.

Zigmond[60] evaluated the intra-sensory and intersensory functioning in normal and dyslexic children to examine intersensory and intrasensory learning and to determine the relationship of neurological integrity to the learning process.

Twenty-five dyslexics and 25 normal achieving readers were tested using measures of auditory and visual intra and intersensory abilities involving memory and discrimination, paired associate learning tasks in which both stimulus and response were manipulated to produce inter- and intrasensory conditions of learning and a pediatric neurological examination.

It was found that auditory inter- and intra-sensory abilities were deficient in dylexics. The intra-sensory visual tasks were learned more quickly than intra-sensory auditory tasks by the dyxlexics.

Data suggests that difficulty encountered by dyxlexics are not restricted to the reading process. The reading problem may be a single aspect of a more general problem.

The tendency of reversing in reading was explored by Monk.[61] It was hypothesized that children in second grade who made reading reversals would have difficulty with right-left discrimination and lateral preference. It was expected that both discrimination and lateral preference would exist in greater proportion in children with relatively lower I.Q.s and reading achievement scores.

The population studied were all the second grade children in five elementary schools of a New York State School system. Tests measuring reading reversals, right-left discrimination, lateral preference, intelligence and reading achievement were administered to each pupil.

Results indicated that children who made reading reversals made significantly more right to left discrimination errors than those who did not reverse. Those pupils who made right-left discrimination errors and

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[58] Paul S. Graubard, "The Use of the Peabody Picture Vocabulary Test in the Prediction and Assessment of Reading Disability in Disturbed Children," *The Journal of Educational Research,* LXI, i, (Sept. 1967), 3-5.

[59] Robert Mitchell Browning, "Effect of Irrelevant Peripheral Visual Stimuli on Discrimination Learning in Minimally Brain-Damaged Children," *Journal of Consulting Psychology,* XXXI, iv, (April, 1967) 371-375.

[60] Naomi Kershman Zigmond, "Intrasensory and Intersensory Processes in Normal and Dyslexic Children," *Dissertation Abstracts,* 27, (April, 1967) 3534A.

[61] Evelyn Silberbusch Monk, "Reading Reversal, Right-Left Discrimination and Lateral Preference," *Dissertation Abstracts,* Vol. 27, No. 11, (May, 1967) 4114B.

reversed in reading had significantly lower I.Q.s and reading achievement than pupils who made right-left discrimination errors but did not reverse.

Results of the study did not support hypothesized relationship between reading reversals and lateral preference. Further investigation of right-left discrimination ability in relation to other perceptual abilities was urged as an approach to the question of a pattern of deficits on behavioral level.

Schab[62] tested the effectiveness of two approaches to remedial reading instruction on the permanence of resulting achievement. The two approaches primarily concerned a difference in planning. The first was teacher, the second pupil—teacher planned. The program of instruction ran one year and at the end of the first year there were no differences in the achievement in reading of the two groups. A followup testing five months later revealed that all pupils continued gains except one group of boys who had been taught in a teacher-planned group. Although there were no significant differences in the achievement of the groups, the pupil-teacher planned groups achieved at a higher level than the teacher-planned group. Teacher-pupil planning worked better in general for boys. Teacher-planning was more successful with girls. While the results were not significant warranted continued study of the role pupils should take in aiding in planning their own remediation.

A limited study by Lytton[63] attempted to determine whether it was more effective to select pupils for remedial education on the basis of tests or teacher recommendations. At the end of the instructional period there were no differences in gains of test-selected and teacher-selected pupils. Intelligence proved to be a good indication of success in remediation and teacher judgment concerning selection of pupils for remediation was at least successful as selection through a battery of tests.

Preston and Yarington[64] reported on the educational and vocational status of a typical sample of retarded readers eight years after treatment in a remedial reading clinic. Fifty individuals, each unsuccessful in school at the time of referral and ranging in ages from 6 yrs. 4 mos. to 17 yrs. and with a mean I.Q. of 97.6, were contacted and interviewed eight years after the completion of their remedial instruction. Thirteen of the subjects were attending high school—six of these were of post-high school age and had experienced slow progress by usual standards. The proportion of pupils attending college was not significantly different from the proportion of the general population in college.

More than two-thirds of the subjects had repeated 1-3 grades compared to 16 per cent in the general population. The proportion of drop outs from elementary and secondary school was not significant when contrasted to the general population. The college attrition rate was higher for the sample than for the population in general. Rate of unemployment for the mature group was not significantly different from the general population.

Overall it was found that these retarded readers of modest ability were able to fill roles in life comparable to their peers even though their rate of educational advancement was slow and limited.

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[62] Fred Schab, "The Effects of Two Different Approaches to Remedial Reading on the Permanence of the Resulting Achievement," *Childhood Education,* 44 (October, 1967) 140-141.

[63] H. Lytton, "Follow-up of an Experiment in Selection for Remedial Education," *The British Journal of Educational Psychology,* 37 (February, 1967) 1-9.

[64] Ralph C. Preston and David J. Yarington, "Status of Fifty Retarded Readers Eight Years After Reading Clinic Diagnosis," *The Journal of Reading,* XI, ii, (November, 1967) 122-129.

The study of Shearer,[65] limited by population and other factors, deserves mention because it, too, considers the long-term effects of remedial education. According to this study all subjects made gains in remedial classes. The portion of the total group receiving continued remediation in high school had unit gains of twice the size as those whose remediation was discontinued. The evidence suggested that it was profitable in terms of continued gains to maintain remedial instruction after pupils left the elementary school.

Another limited follow-up study of elementary pupils by Buerger[66] indicated that reassessment of pupils after a varied time had elapsed after the completion of remediation, it was revealed that, while remediation did not seem to have a specific effect on academic achievement, it did effect the overall academic level of the pupils involved. Boys in the remedial group seemed to be aided most by remediation and 87 per cent of the total group expressed the belief that remediation had been of help to them. The study suggested that post-remedial follow-up was essential both as a means of gauging the value of remediation and also as an aid in planning continued help for former remedial students.

An extensive review of the research on the learning patterns in the disadvantaged by Stodolsky and Lesser,[67] too broad in scope to be presented in detail, deserves the attention of those interested in the learning of the disadvantaged. The authors conclude after their extensive study that both social class and ethnicity affect the *level* of intellectual performance but only ethnicity fosters the development of a *different* pattern of abilities. The authors suggested a number of future research studies including an evaluation of the specific origins and antecedents of differential patterns of mental ability and the school behaviors predicted by these patterns. The review has implications for the teacher of the disadvantaged reader in terms of the development of preventative and supportive programs of instruction.

Ramsey[68] surveyed reading instruction in the Appalachia region of Kentucky and found that the amount of time spent in reading instruction is below recommended levels, library facilities are wanting, experiments are needed to determine best places of grouping, inservice programs for teachers are needed and remedial programs are suggested. Ramsey seems to indicate that instruction in Appalachia is unnecessarily poor or inadequate and that the region needs to look at its instructional program and improve it with existing facilities in addition to the outside aid available.

The reviewers found a number of additional articles of interest to the reading specialist and cite only the bibliographical references of those which were thought to be of most interest.

Albert J. Kingston and Wendell W. Weaver, "Recent Developments in Readability Appraisal." In "Research for the Classroom," edited by Albert J. Kingston, *The Journal of Reading*, XI, i, (October, 1967), 44-47.

Regis B. Wiegand, "Pittsburgh Looks at the Readability of Mathematics Textbooks," *The Journal of Reading*, XI, iii, (December, 1967), 201-205.

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[65] E. Shearer, "The Long-Term Effects of Remedial Education," *Educational Research*, 9 (June, 1967).

[66] Theodore A. Buerger, "Elementary School Pupils Who Received Remedial Reading Instruction: A Follow-Up Study of the Educational Progress and Attitudes of Remedial and Non-Remedial Groups," *Dissertation Abstracts*, 27 (April, 1967) 3300A, 3301A.

[67] Susan S. Stodolsky and Gerald Lesser, "Learning Patterns in the Disadvantaged," *Harvard Educational Review* XXXVII, iv (Fall, 1967), 546-593.

[68] Wallace Ramsey, "Reading in Appalachia," *The Reading Teacher*, 21 (October 1967), 57-63.

Wendell W. Weaver and Albert J. Kingston, "Questioning in Content Reading." In "Research for the Classroom," edited by Albert J. Kingston, *The Journal of Reading*, XI, ii, (November, 1967), 140-143.

Carl L. Rosen, "Mechanical Devices for Increasing Speed of Reading." In Kingston, Albert J. (ed.), "Research for the Classroom," *Journal of Reading*, X, viii, (May, 1967) 569-576.

Marion Potts, "The Effect of Second-Language Instruction on the Reading Proficiency and General School Achievement of Primary-Grade Children," *American Educational Research Journal* 4 (November, 1967) 367-373.

Thaddeus M. Trela, "Comparing Achievement on Tests of General and Critical Reading," *Journal of the Reading Specialist*, VI, iv, (May, 1967) 140-142.

A. Adolph Christensen, "A Diagnostic Study of Oral Reading Errors of Intermediate Grade Children at Their Independent, Instructional and Frustration Reading Levels," *Dissertation Abstracts*, 27 (February, 1967) 2270A.

Frank J. Guszak, "Teacher Questioning and Reading," *The Reading Teacher*, 21 (December, 1967), 227-234.

Mary Ellen Perkins, "The Effects of a Summer Reading Program on Culturally Disadvantaged Children of First, Second, and Third Grades," *Dissertation Abstracts* 27, (February, 1967) 2450A-2451A.

Sally Annette Sibley, "Reading Rate and Accuracy of Retarded Readers as a Function of Fixed-Ratio Schedules of Conditioned Reinforcement," *Dissertation Abstracts*, Vol. 27, No. 11 (May, 1967) 4134-5B.